Marshall Cavendish Education

3

PRIMARY MATHEMATICS

Standards Edition

EXTRA PRACTICE



Name: _____ Class: _____

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Unit 1 : Numbers to 10,000

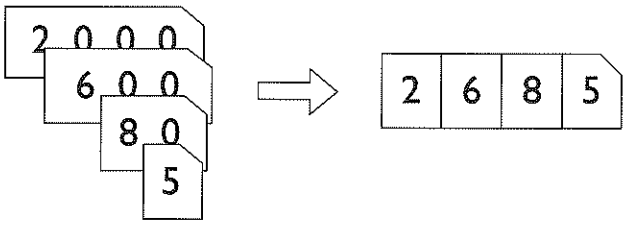
Friendly Notes

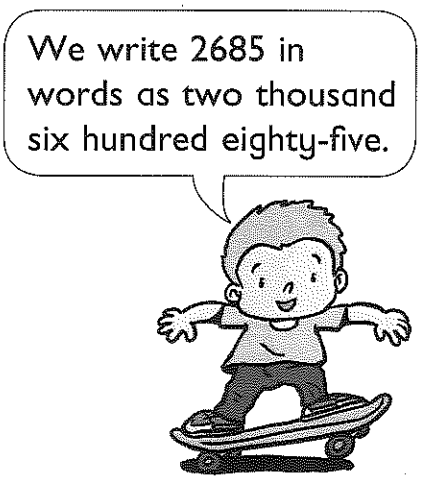
Thousands, Hundreds, Tens and Ones

1. Count the thousands, hundreds, tens and ones in this chart.

1000 1000	100 100 100 100 100 100	10 10 10 10 10 10 10 10	1 1 1 1 1

2000 + 600 + 80 + 5 = 2685
2685 is the **standard form** of 2685.
2000 + 600 + 80 + 5 is the **expanded form** of 2685.

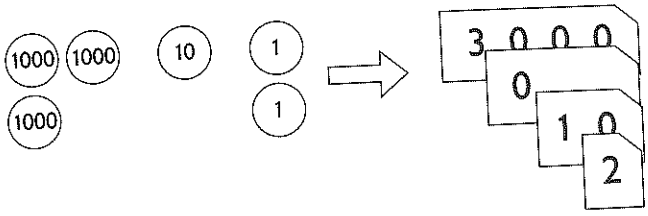


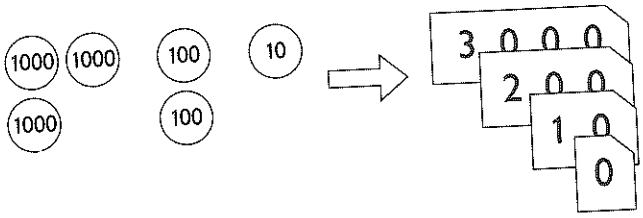


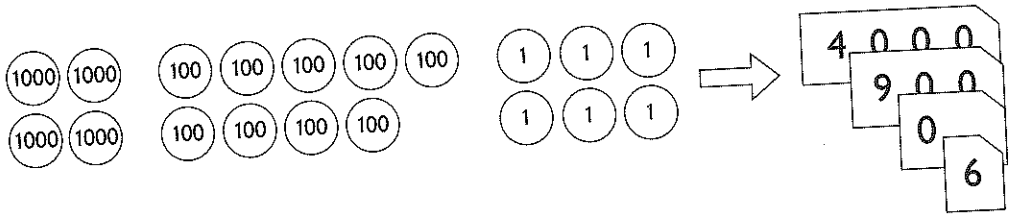
In 2685,
the digit 2 is in the thousands place.
Its value is 2000.
The digit 6 is in the hundreds place.
Its value is 600.
The digit 8 is in the tens place.
Its value is 80.
The digit 5 is in the ones place.
Its value is 5.

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2. Compare the numbers 3012, 3210, 4906.
Which is the greatest number?
Which is the smallest number?









4 thousands is the greatest.
So, 4906 is the greatest number.



0 hundreds is less than 2 hundreds.
So, 3012 is the smallest number.

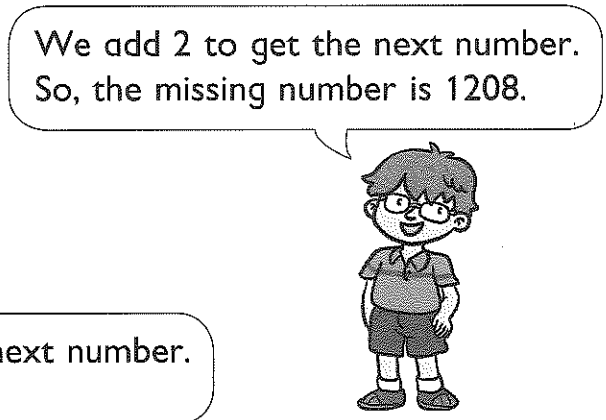
Arranging the numbers in order beginning with the smallest, we have 3012, 3210, 4906.

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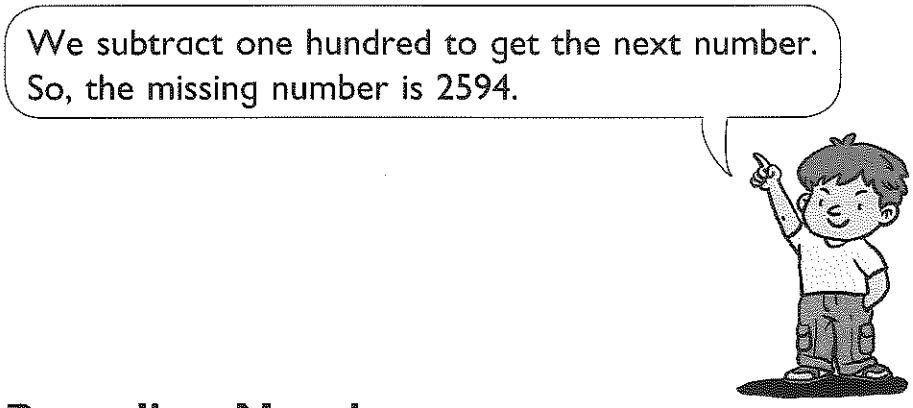
Number Patterns

In a number pattern, we first find out how the given numbers are related to one another to find the missing numbers.

1. 1202, 1204, 1206, _____

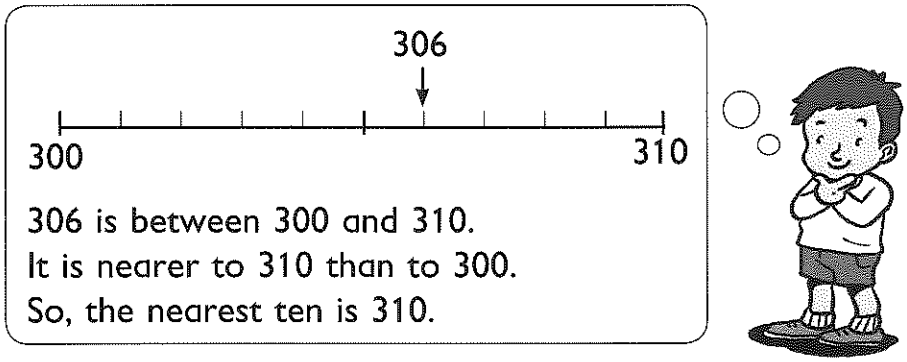


2. 2894, 2794, 2694, _____



Rounding Numbers

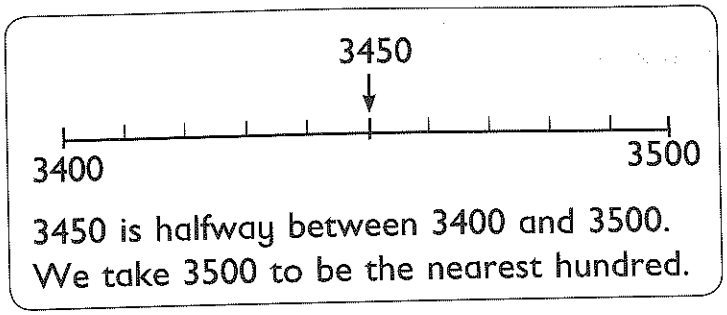
1. Round 306 to the nearest ten.



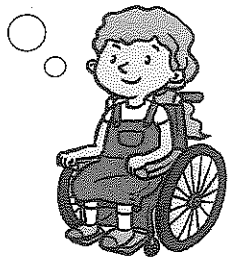
306 is 310 when rounded to the nearest ten.

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2. Round 3450 to the nearest hundred.

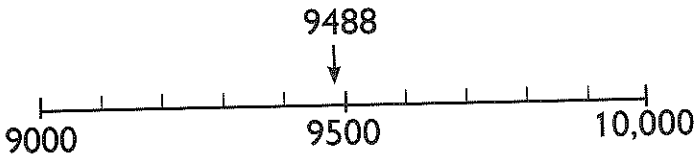


3450 is halfway between 3400 and 3500.
We take 3500 to be the nearest hundred.

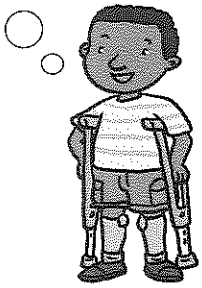


3450 is 3500 when rounded to the nearest hundred.

3. Round 9488 to the nearest thousand.



9488 is less than halfway between 9000 and 10,000.
It is nearer to 9000 than to 10,000.



9488 is 9000 when rounded to the nearest thousand.

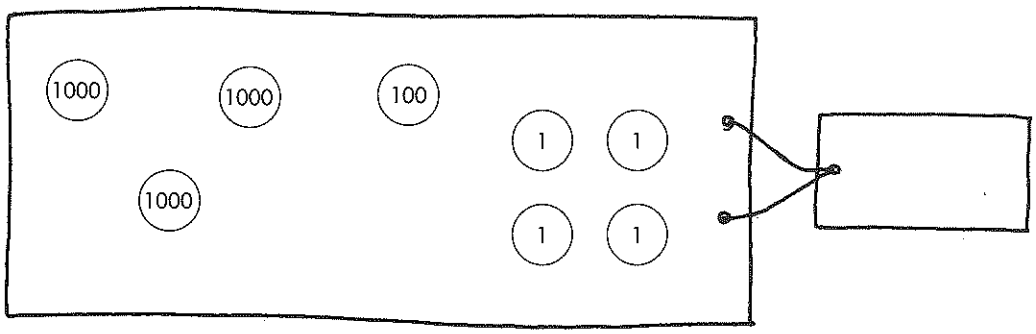
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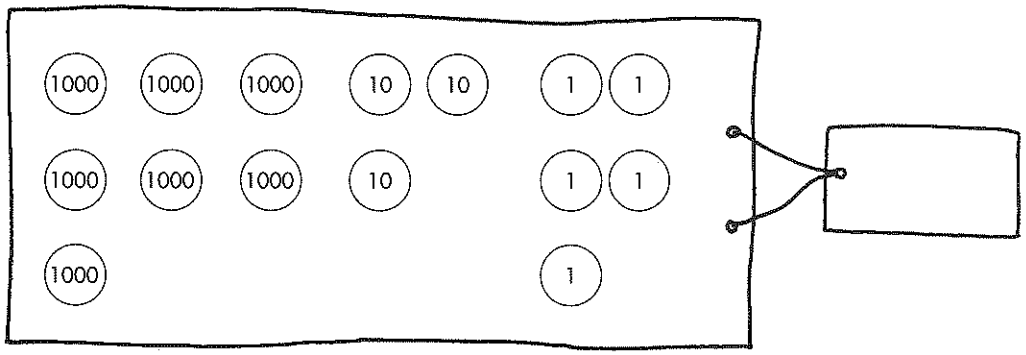
Exercise 1A : Thousands, Hundreds, Tens and Ones

1. Write the numbers.

(a)



(b)



2. Write the numbers.

(a)	two hundred four	
(b)	three thousand, seven hundred eleven	
(c)	four thousand, nine	
(d)	one thousand, five hundred	
(e)	five thousand, two hundred forty-three	

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3. Write the numbers in words.

(a)	520	
(b)	3805	
(c)	5001	
(d)	6043	
(e)	7290	
(f)	9018	

4. Write the missing numbers.

(a) $208 = \square + 8$

(b) $1379 = 1000 + 300 + \square + 9$

(c) $3801 = 3000 + 800 + \square$

(d) $4625 = \square + 600 + 20 + 5$

(e) $7045 = 7000 + \square + 5$

(f) $9876 = 9000 + \square + 70 + 6$

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Exercise 1B : Thousands, Hundreds, Tens and Ones

1. Fill in the blanks.

Thousands	Hundreds	Tens	Ones
4	3	1	5

(a) 4315 is a 4-digit number.

It is made up of _____ thousands, _____ hundreds, _____ ten and _____ ones.

(b) In 4315, the digit **4** stands for _____.

(c) In 4315, the digit **3** is in the _____ place.

Its value is _____.

(d) In 4315, the digit _____ is in the **tens place.**

Its value is _____.

(e) In 4315, the digit _____ is in the **ones place.**

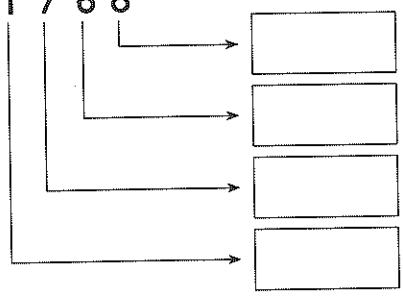
Its value is _____.

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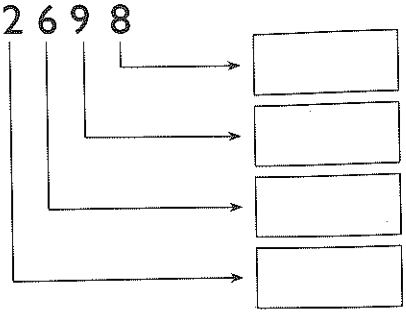
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2. What does each digit in each of the following numbers stand for?

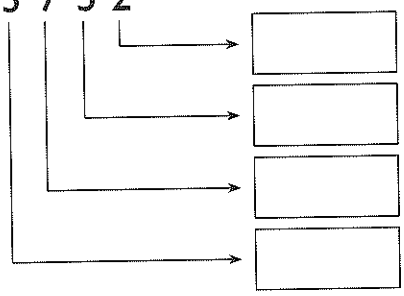
(a) 1 7 6 8



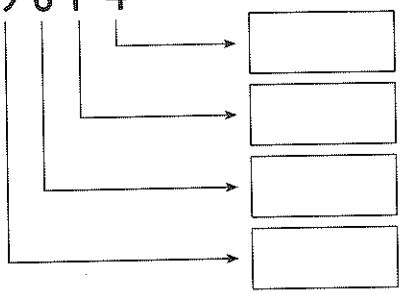
(b) 2 6 9 8



(c) 3 7 5 2



(d) 9 6 1 4



3. What does the digit 3 in each of the following numbers stand for?

(a) 3817 _____

(b) 8013 _____

(c) 9326 _____

(d) 4530 _____

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Exercise 1C : Thousands, Hundreds, Tens and Ones

1. Circle the greater number.

   (a) 2015 2186

   (b) 6137 8137

   (c) 5766 6857

   (d) 2352 2382

2. Circle the smaller number.

   (a) 5781 9871

   (b) 6624 6824

   (c) 8107 8017

   (d) 9532 9563

3. Write >, < or = in each ◯.

   (a) 1263 ◯ 2263

   (b) 4872 ◯ 4960

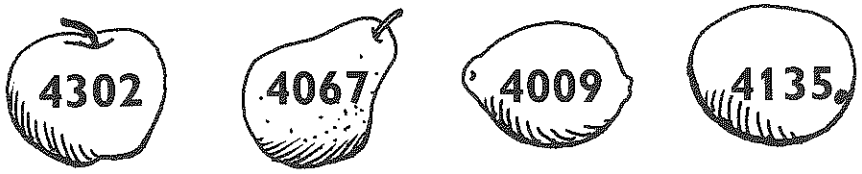
   (c) 5797 ◯ 5777

   (d) 6091 ◯ 6084

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4. Arrange the numbers in order.

(a) Begin with the smallest.



_____ , _____ , _____ , _____

(b) Begin with the greatest.



_____ , _____ , _____ , _____

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Exercise 2 : Number Patterns

1. Fill in the blanks.

   (a) _____ is 10 less than 1049.

   (b) _____ is 10 more than 1806.

   (c) _____ is 100 less than 3690.

   (d) _____ is 100 more than 4892.

   (e) _____ is 1000 less than 9074.

   (f) _____ is 1000 more than 7001.

2. Fill in the blanks.

   (a) 3812 is _____ more than 3811.

   (b) 3812 is _____ more than 3802.

   (c) 3812 is _____ more than 3712.

   (d) 3812 is _____ more than 2812.

3. Fill in the blanks.

   (a) 7659 is 1 less than _____.

   (b) 7659 is 10 less than _____.

   (c) 7659 is 100 less than _____.

   (d) 7659 is 1000 less than _____.

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4. Complete the regular number patterns.

(a) 4010, 4020, 4030, _____, 4050

(b) 4010, 4110, 4210, _____, 4410

(c) 4010, 5010, 6010, _____, 8010

(d) 4010, 4011, 4012, _____, 4014

5. Complete the regular number patterns.

(a) 9253, 9252, 9251, _____, 9249

(b) 9253, 9243, 9233, _____, 9213

(c) 9253, 8253, 7253, _____, 5253

(d) 9253, 9153, 9053, _____, 8853

6. Complete the regular number patterns.

(a) 6055, 6155, _____, _____, 6455

(b) 5361, _____, _____, 8361, 9361

(c) 2409, _____, 2389, 2379, _____

(d) _____, 1068, 2068, _____, 4068

(e) 9652, _____, 7652, 6652, _____

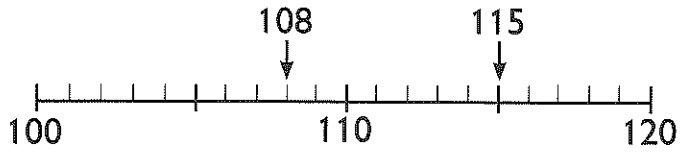
(f) _____, 3626, 3526, _____, 3326

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Exercise 3 : Rounding Numbers

1. Round to the nearest ten.
Fill in the blanks.



(a) 108 is between 100 and _____.

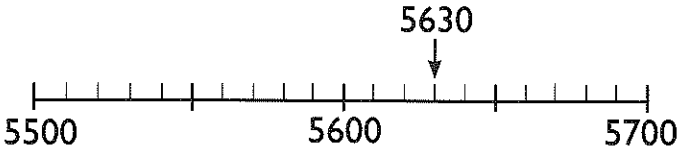
108 is nearer to _____ than to _____.

108 is _____ when rounded to the nearest ten.

(b) 115 is halfway between _____ and _____.

115 is _____ when rounded to the nearest ten.

2. Round to the nearest hundred.
Fill in the blanks.



5630 is between 5600 and _____.

5630 is nearer to _____ than to _____.

5630 is _____ when rounded to the nearest hundred.

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3. Round each number to the nearest ten.

(a) 321 ☐ (b) 468 ☐

(c) 595 ☐ (d) 1018 ☐

(e) 3622 ☐ (f) 4759 ☐

4. Round each number to the nearest hundred.

(a) 1568 ☐ (b) 9084 ☐

(c) 3146 ☐ (d) 2288 ☐

(e) 7604 ☐ (f) 5550 ☐

5. Round each number to the nearest thousand.

(a) 6214 ☐ (b) 9294 ☐

(c) 4581 ☐ (d) 8500 ☐

(e) 3899 ☐ (f) 2916 ☐

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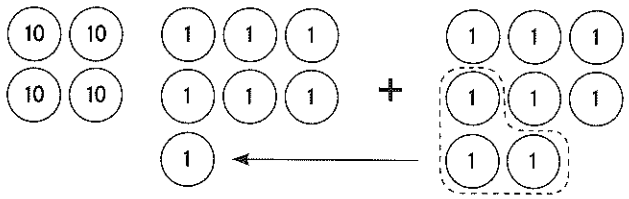
Unit 2 : Addition and Subtraction

Friendly Notes

Sum and Difference Within 100

We add to find the **sum**.

1. Find the sum of 47 and 8.



47 + 8

3 5

Make a 10 first.

47 + 8

3 5

47 + 3 = 50

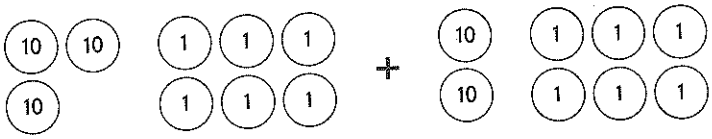
50 + 5 = 55

47 + 8 = 55

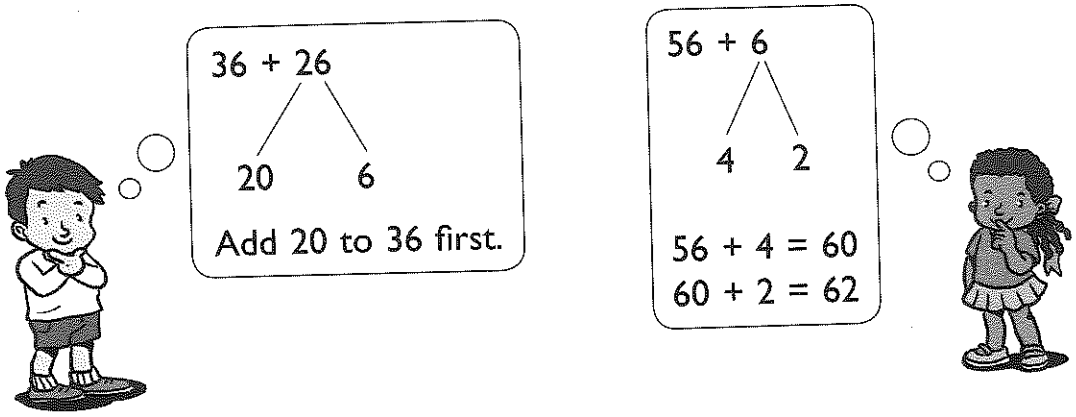


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2. Find the sum of 36 and 26.

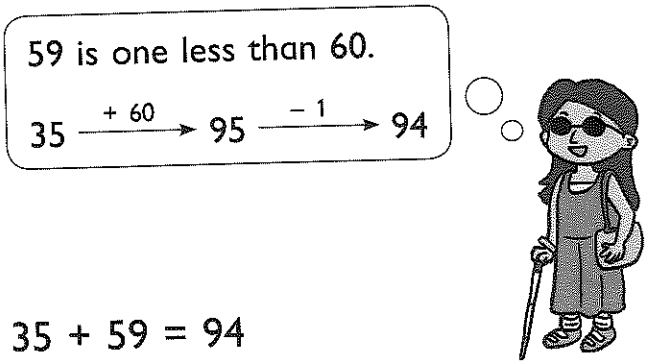


$36 \xrightarrow{+\ 20} 56 \xrightarrow{+\ 6} 62$



$36 + 26 = 62$

3. Add 35 and 59.

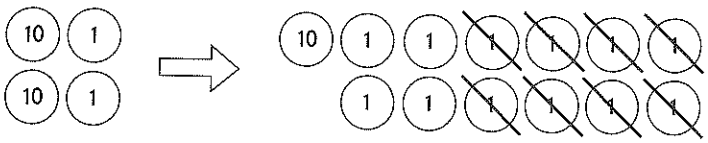


$35 + 59 = 94$

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We subtract the smaller number from the greater number to find the **difference**.

4. Find the difference between 22 and 8.





22 − 8

12 10

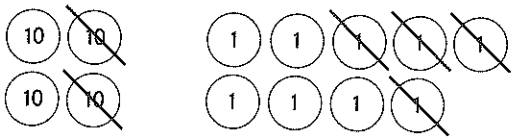
10 − 8 = 2

12 + 2 = 14



22 − 8 = 14

5. Find the difference between 49 and 24.



49 $\xrightarrow{-20}$ 29 $\xrightarrow{-4}$ 25

49 − 24 = 25

49 − 24

20 4

Subtract 20 from 49 first.



6. Subtract 19 from 75.

19 is one less than 20.

75 $\xrightarrow{-20}$ 55 $\xrightarrow{+1}$ 56



75 − 19 = 56

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Sum and Difference Within 1000

To add two 3-digit numbers, we add the ones first, followed by the tens and then the hundreds.

1. Find the sum of 362 and 259.

Add the ones.

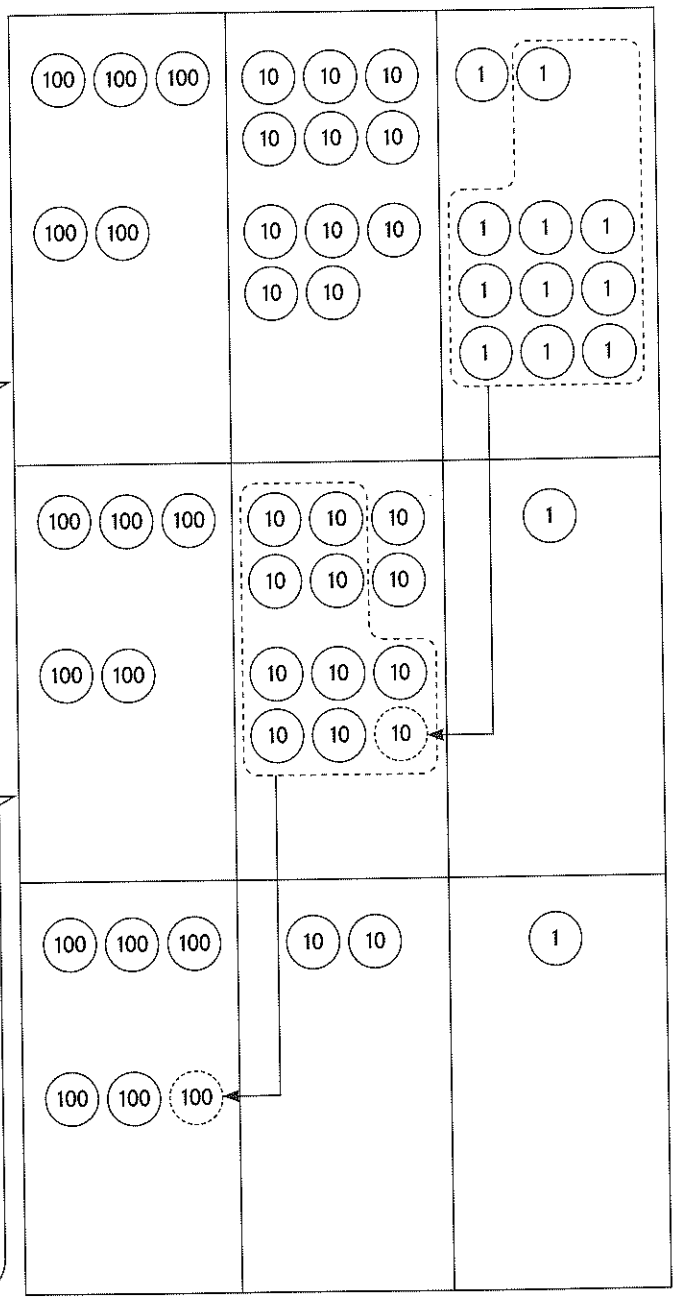
$$\begin{array}{r} {\scriptstyle 1} \\ 362 \\ +\ 259 \\ \hline 1 \end{array}$$

Add the tens.

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 362 \\ +\ 259 \\ \hline 21 \end{array}$$

Add the hundreds.

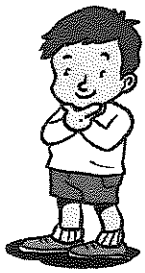
$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 362 \\ +\ 259 \\ \hline 621 \end{array}$$



10 ones make 1 ten.



10 tens make 1 hundred.



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To find the difference between two 3-digit numbers, we subtract the ones first, followed by the tens and then the hundreds.

2. Find the difference between 362 and 259.

Subtract the ones.

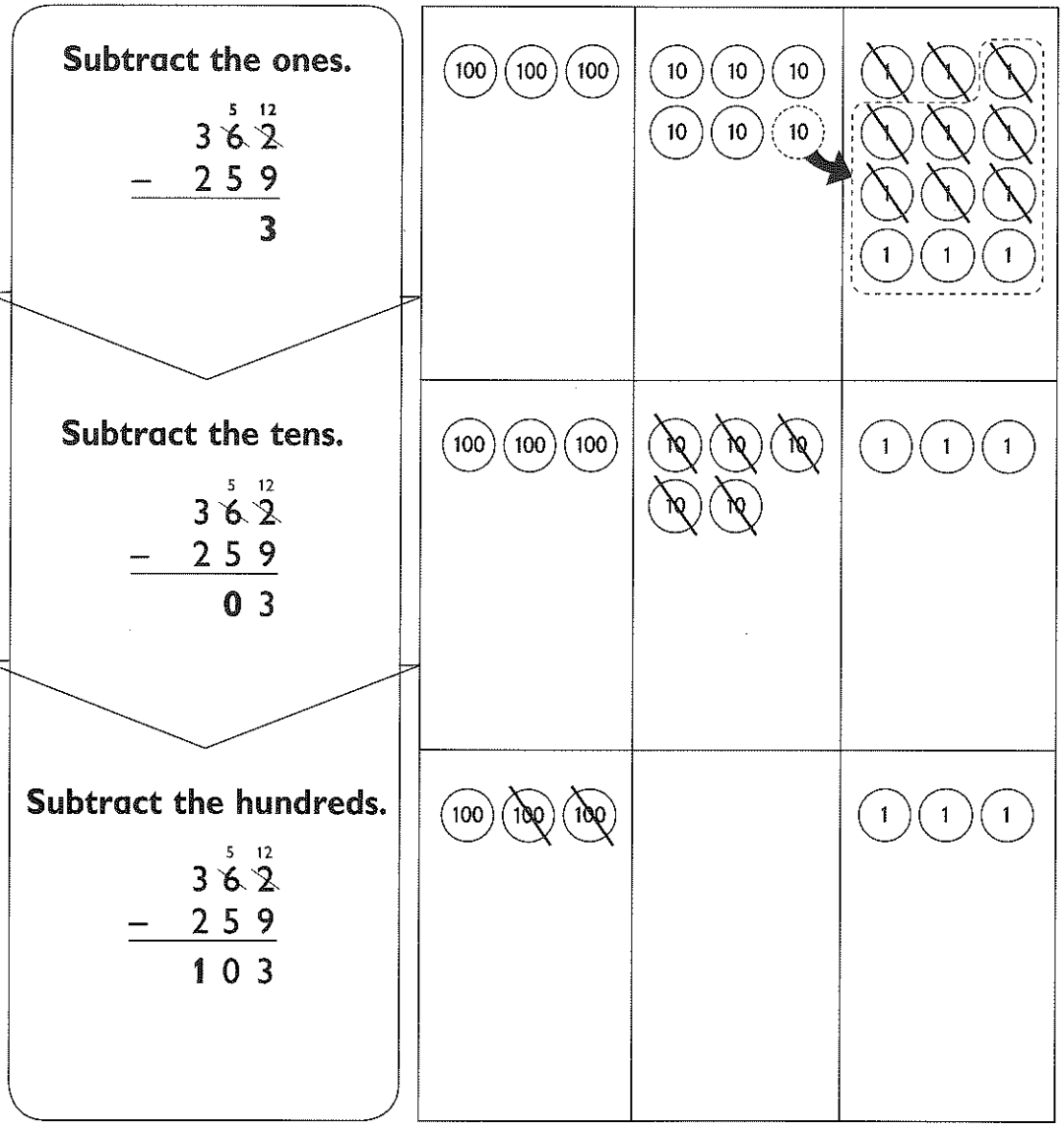
$$\begin{array}{r} {}^{5}\,{}^{12} \\ 3\,6\,\not{2} \\ -\ 2\,5\,9 \\ \hline 3 \end{array}$$

Subtract the tens.

$$\begin{array}{r} {}^{5}\,{}^{12} \\ 3\,\not{6}\,\not{2} \\ -\ 2\,5\,9 \\ \hline 0\,3 \end{array}$$

Subtract the hundreds.

$$\begin{array}{r} {}^{5}\,{}^{12} \\ 3\,\not{6}\,\not{2} \\ -\ 2\,5\,9 \\ \hline 1\,0\,3 \end{array}$$



10 ones make 1 ten.

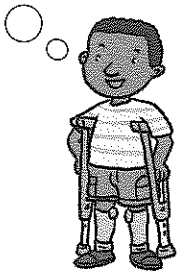


10 tens make 1 hundred.



We can check our answers with addition.

$$\begin{array}{r} {}^{1} \\ 2\,5\,9 \\ +\ 1\,0\,3 \\ \hline 3\,6\,2 \end{array}$$



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Adding Ones, Tens, Hundreds and Thousands

To find the sum of two 4-digit numbers,
Step 1: Add the ones.
Step 2: Add the tens.
Step 3: Add the hundreds.
Step 4: Add the thousands.

Change 10 ones for 1 ten, 10 tens for 1 hundred, 10 hundreds for 1 thousand when we have more than 10 ones, 10 tens or 10 hundreds to add.

Find the sum of 3098 and 2386.

Estimate the value by rounding to the nearest thousand.
3098 is about 3000.
2386 is about 2000.
3000 + 2000 = 5000
The answer should be around 5000.



Add the ones.

$$\begin{array}{r} {\scriptstyle 1} \\ 3098 \\ +\ 2386 \\ \hline 4 \end{array}$$

Change 10 ones for 1 ten.

Add the tens.

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 3098 \\ +\ 2386 \\ \hline 84 \end{array}$$

Change 10 tens for 1 hundred.

Add the hundreds.

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 3098 \\ +\ 2386 \\ \hline 484 \end{array}$$

Add the thousands.

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 3098 \\ +\ 2386 \\ \hline 5484 \end{array}$$

5484 is close to the estimated answer of 5000.
So, the answer is reasonable.

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Subtracting Ones, Tens, Hundreds and Thousands

To find the difference between two 4-digit numbers,
Step 1: Subtract the ones.
Step 2: Subtract the tens.
Step 3: Subtract the hundreds.
Step 4: Subtract the thousands.

Change 1 ten for 10 ones,
1 hundred for 10 tens,
1 thousand for 10 hundreds
when we do not have enough ones, tens or hundreds to subtract from.

Find the difference between 4098 and 1795.

Subtract the ones.

$$\begin{array}{r} 4098 \\ -\ 1795 \\ \hline 3 \end{array}$$

Subtract the tens.

$$\begin{array}{r} 4098 \\ -\ 1795 \\ \hline 03 \end{array}$$

Subtract the hundreds.

$$\begin{array}{r} {\scriptstyle 3\ 10} \\ 4\cancel{0}98 \\ -\ 1795 \\ \hline 303 \end{array}$$

Change 1 thousand for 10 hundreds.

Subtract the thousands.

$$\begin{array}{r} {\scriptstyle 3\ 10} \\ 4\cancel{0}98 \\ -\ 1795 \\ \hline 2303 \end{array}$$

...e thousands.

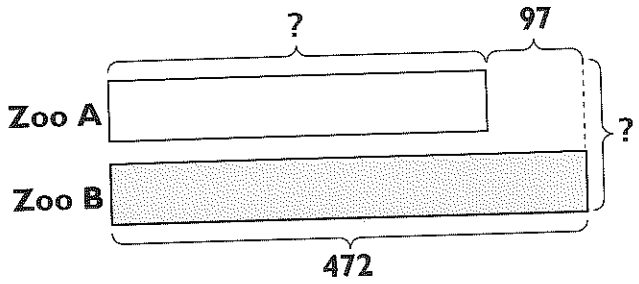
$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 3098 \\ +\ 2386 \\ \hline 5484 \end{array}$$

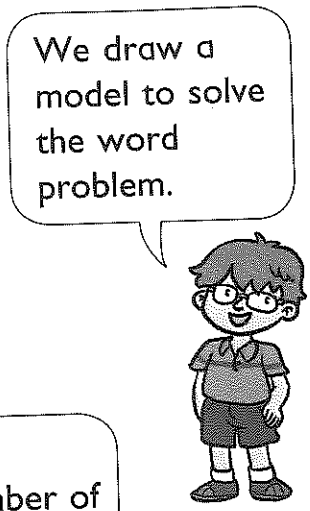
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Two-step Word Problems

Models can help us solve addition and subtraction word problems more easily.

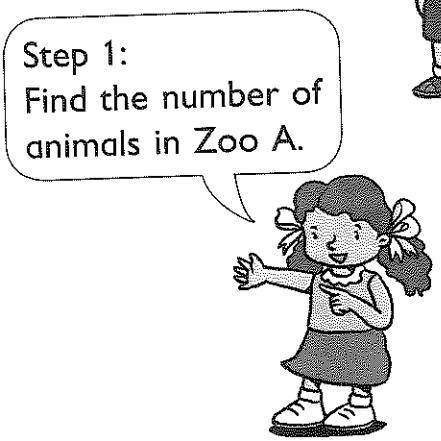
There are 472 animals at Zoo B.
There are 97 fewer animals at Zoo A than Zoo B.
How many animals are there altogether?





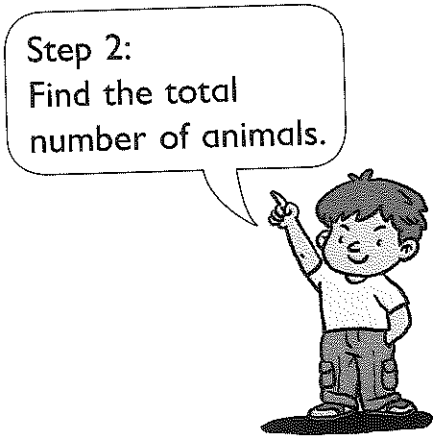
$472 - 97 = 375$

There are 375 animals in Zoo A.



$375 + 472 = 847$

There are 847 animals altogether.



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Exercise 1A : Sum and Difference Within 100

1. Write the numbers.

(a) $27 + 6 =$ ☐

3 3

(b) $32 + 9 =$ ☐

8 1

(c) $45 + 8 =$ ☐

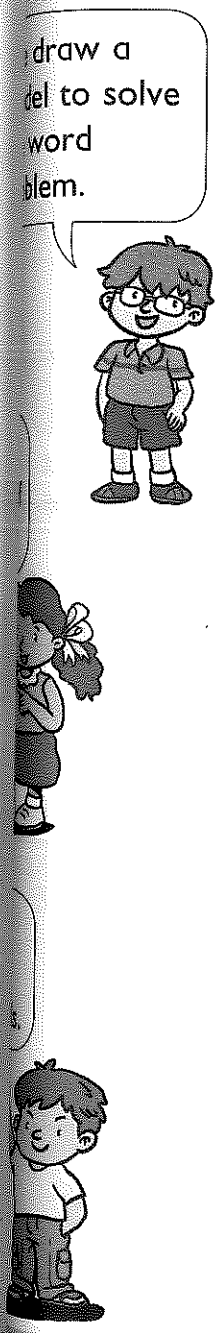
43 2

(d) $56 + 7 =$ ☐

53 3

(e) $68 + 9 =$ ☐

67 1



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2. Fill in the boxes.

(a) 17 $\xrightarrow{+20}$ ☐ $\xrightarrow{+8}$ ☐

17 + 28 = ☐

(b) 36 $\xrightarrow{+10}$ ☐ $\xrightarrow{+9}$ ☐

36 + 19 = ☐

(c) 48 $\xrightarrow{+40}$ ☐ $\xrightarrow{+6}$ ☐

48 + 46 = ☐

3. Fill in the boxes.

(a) What number is 5 more than 82? ☐

(b) What number is 30 more than 47? ☐

(c) What number is 26 more than 32? ☐

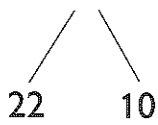
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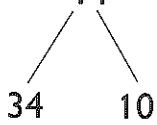
Exercise 1B : Sum and Difference Within 100

1. Fill in the boxes.

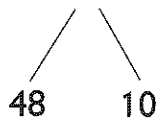
(a) $32 - 8 =$ ☐



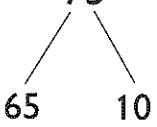
(b) $44 - 6 =$ ☐



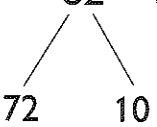
(c) $58 - 9 =$ ☐



(d) $75 - 7 =$ ☐



(e) $82 - 5 =$ ☐



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2. Fill in the boxes.

(a) 42 $\xrightarrow{-30}$ ☐ $\xrightarrow{-6}$ ☐

42 − 36 = ☐

(b) 57 $\xrightarrow{-20}$ ☐ $\xrightarrow{-9}$ ☐

57 − 29 = ☐

(c) 91 $\xrightarrow{-50}$ ☐ $\xrightarrow{-7}$ ☐

91 − 57 = ☐

3. Fill in the boxes.

(a) What number is 7 less than 21? ☐

(b) What number is 20 less than 76? ☐

(c) What number is 35 less than 50? ☐

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Name: _____ Class: _____ Date: _____

Exercise 1C : Sum and Difference Within 100

1. Write the missing numbers.

(a) 24 + ☐ = 98

(b) 56 + ☐ = 70

(c) ☐ + 36 = 75

(d) ☐ + 43 = 61

2. Write the missing numbers.

(a) 84 – ☐ = 37

(b) 79 – ☐ = 18

(c) ☐ – 26 = 51

(d) ☐ – 42 = 49

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3. Write the missing numbers.

(a) $70 - \square = 55 + 10$

(b) $\square - 25 = 85 - 60$

(c) $20 + \square = 45 + 15$

(d) $\square + 35 = 60 - 15$

4. Draw models to solve the following.

Fill in the boxes.

(a) 57 is $\square$ less than 90.

(b) 15 more than 76 is $\square$.

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(c) ☐ less than 81 is 25.

5. Fill in the boxes.

(a) 21 more than ☐ is 79.

(b) ☐ more than 31 is 87.

(c) 65 less than ☐ is 30.

6. Fill in the boxes with + or − in each ◯.

(a) 28 ◯ 17 = 11

(b) 32 ◯ 16 = 48

(c) 90 ◯ 47 = 43

(d) 72 ◯ 16 = 56

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7. Find each sum or difference. Then write >, < or = in each ◯.

(a) 10 + 6 ◯ 16 – 5

(b) 27 + 20 ◯ 52 – 10

(c) 63 – 10 ◯ 83 – 20

(d) 88 + 5 ◯ 100 – 7

(e) 36 + 37 ◯ 80 – 15

(f) 59 – 12 ◯ 68 – 21

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Name: _____ Class: _____ Date: _____

Exercise 2A : Sum and Difference Within 1000

1. Find the value of each of the following.

(a) $\begin{array}{r} 123 \\ +\ 415 \\ \hline \end{array}$ (b) $\begin{array}{r} 595 \\ +\ 108 \\ \hline \end{array}$ (c) $\begin{array}{r} 388 \\ +\ 142 \\ \hline \end{array}$

(d) $\begin{array}{r} 890 \\ -\ 164 \\ \hline \end{array}$ (e) $\begin{array}{r} 942 \\ -\ 865 \\ \hline \end{array}$ (f) $\begin{array}{r} 704 \\ -\ 237 \\ \hline \end{array}$

2. Fill in the boxes.

(a) 563 + 97 = ☐

(b) 696 + 98 = ☐

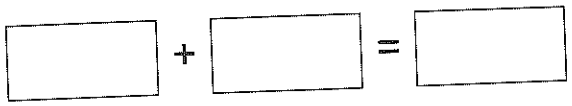
(c) 745 − 96 = ☐

(d) 801 − 99 = ☐

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3. Estimate the value of each of the following by rounding each number to the nearest ten.

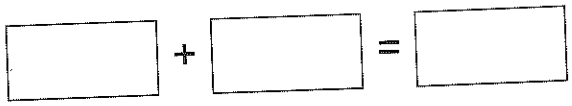
(a) 62 + 76



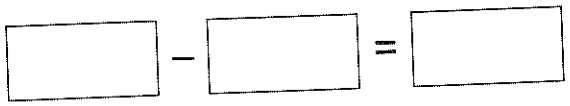
(b) 58 + 93



(c) 672 + 197



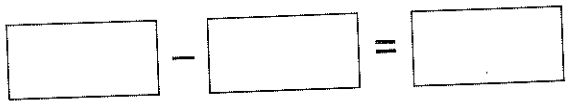
(d) 91 – 78



(e) 87 – 25



(f) 261 – 139



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ing each

4. Estimate the value of each of the following by rounding each number to the nearest hundred.

(a) 563 + 312

☐ + ☐ = ☐

(b) 695 + 214

☐ + ☐ = ☐

(c) 716 + 182

☐ + ☐ = ☐

(d) 992 – 567

☐ – ☐ = ☐

(e) 847 – 699

☐ – ☐ = ☐

(f) 768 – 409

☐ – ☐ = ☐

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5. Write the missing numbers.

(a) $\square$ + 473 = 500

(b) $\square$ + 517 = 600

(c) 682 + $\square$ = 700

(d) 739 + $\square$ = 800

(e) $\square$ + 872 = 900

6. Write the missing numbers.

(a) 500 − $\square$ = 312

(b) $\square$ − 192 = 408

(c) 800 − $\square$ = 365

(d) $\square$ − 254 = 176

(e) 530 − $\square$ = 180

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Name: _____ Class: _____ Date: _____

Exercise 2B : Sum and Difference Within 1000

1. Do these. Show your work clearly.

   (a) Tom has 153 stamps. Ryan gives him 98 stamps. How many stamps does Tom have now?

   (b) Alison has 257 beads. Sally has 319 beads. How many more beads does Sally have than Alison?

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(c) After selling 575 eggs, Mr. Lim had 283 eggs left.
How many eggs did he have at first?

(d) A shopkeeper had 976 exercise books.
765 of them were sold.
How many exercise books were left?

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gs left.

Name: _____ Class: _____ Date: _____

Exercise 3 : Adding Ones, Tens, Hundreds and Thousands

1. Add.

(a) 3072 + 8 = _____

(b) 1947 + 60 = _____

(c) 3615 + 90 = _____

(d) 4625 + 400 = _____

(e) 7138 + 900 = _____

(f) 8800 + 200 = _____

2. Write the missing numbers.

(a) ☐ – 352 = 1000

(b) ☐ – 1352 = 2000

(c) ☐ – 527 = 1000

(d) ☐ – 2527 = 3000

(e) ☐ – 4816 = 5000

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3. Add.

(a) $\begin{array}{r} 1326 \\ +\quad 7 \\ \hline \end{array}$

(b) $\begin{array}{r} 2435 \\ +\quad 84 \\ \hline \end{array}$

(c) $\begin{array}{r} 1208 \\ +\quad 672 \\ \hline \end{array}$

(d) $\begin{array}{r} 1450 \\ +\quad 364 \\ \hline \end{array}$

(e) $\begin{array}{r} 2147 \\ +\quad 376 \\ \hline \end{array}$

(f) $\begin{array}{r} 2803 \\ +\quad 516 \\ \hline \end{array}$

(g) $\begin{array}{r} 4334 \\ +\quad 807 \\ \hline \end{array}$

(h) $\begin{array}{r} 4521 \\ +\quad 279 \\ \hline \end{array}$

(i) $\begin{array}{r} 6578 \\ +\quad 435 \\ \hline \end{array}$

(j) $\begin{array}{r} 2493 \\ +\ 5839 \\ \hline \end{array}$

(k) $\begin{array}{r} 2678 \\ +\ 3888 \\ \hline \end{array}$

(l) $\begin{array}{r} 3204 \\ +\ 1529 \\ \hline \end{array}$

(m) $\begin{array}{r} 5874 \\ +\ 4126 \\ \hline \end{array}$

(n) $\begin{array}{r} 6524 \\ +\ 2778 \\ \hline \end{array}$

(o) $\begin{array}{r} 7305 \\ +\ 1997 \\ \hline \end{array}$

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Name: _____ Class: _____ Date: _____

Exercise 4 : Subtracting Ones, Tens, Hundreds and Thousands

1. Subtract.

(a) 1910 – 8 = _____

(b) 2700 – 20 = _____

(c) 4600 – 30 = _____

(d) 5000 – 600 = _____

(e) 8000 – 700 = _____

(f) 9000 – 400 = _____

2. Write the missing numbers.

(a) ☐ + 3093 = 4000

(b) 4361 + ☐ = 5000

(c) ☐ + 5282 = 6000

(d) 6605 + ☐ = 7000

(e) ☐ + 7721 = 8000

1208
+ 672

2803
+ 516

6578
+ 435

3204
+ 1529

7305
+ 1997

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3. Subtract.

(a) 1736 − 372

(b) 1465 − 648

(c) 2453 − 545

(d) 2582 − 458

(e) 3064 − 743

(f) 3257 − 579

(g) 3214 − 1268

(h) 3421 − 1865

(i) 5301 − 4498

(j) 6214 − 3217

(k) 6284 − 1287

(l) 7045 − 6876

(m) 7200 − 3254

(n) 8301 − 8297

(o) 9002 − 2768

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) 2453
− 545

) 3257
− 579

5301
−4498

7045
−6876

9002
−2768

Name: _____ Class: _____ Date: _____

Exercise 5 : Two-step Word Problems

1. Do these. Show all your work clearly.

(a) A television costs $1045.
It is $968 cheaper than a refrigerator.
What is the total cost of the refrigerator and the television?

(b) There are 2045 students in a school.
1013 of them are girls.
How many more boys than girls are there in the school?

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(c) A mailman delivered 1352 letters on Monday.
He delivered 76 more letters on Tuesday than on Monday and 1296 letters on Wednesday.
How many letters did he deliver altogether?

(d) Mrs. Chen had $5039.
She spent $1543 on a set of furniture and $2698 on a piano.
How much money did she have left?

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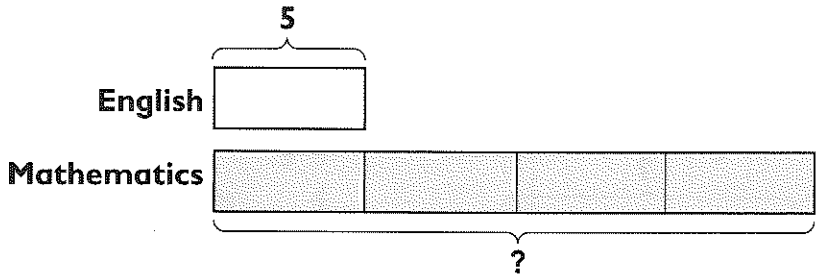
Unit 3 : Multiplication and Division

Friendly Notes

Word Problems

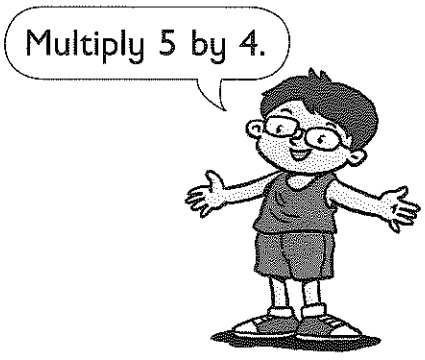
Models can also help us solve multiplication and division word problems.

1. There are 5 English books.
   There are 4 times as many Mathematics books as English books.
   How many Mathematics books are there?



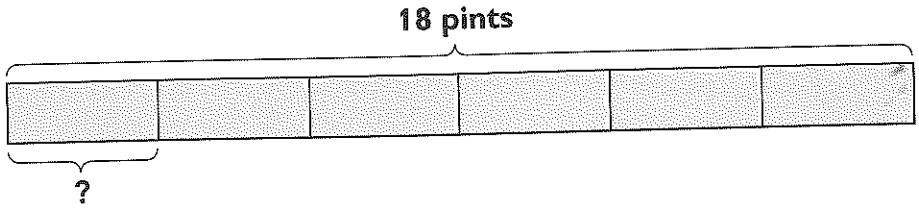
$5 \times 4 = 20$

There are 20 Mathematics books.



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2. Mrs. Simpson bought 18 pints of milk.
She gave the milk equally to 6 children.
How many pints of milk did each child get?



$18 \div 6 = 3$

Each child got 3 pints of milk.

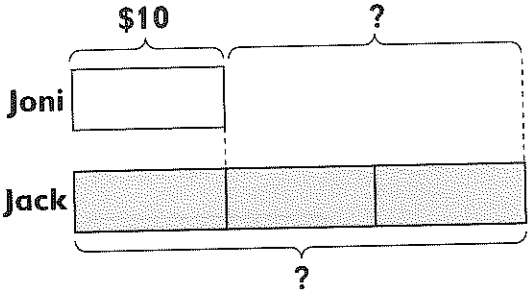
6 units = 18 pints
1 unit = 18 ÷ 6



3. Joni has $10.

Jack has 3 times as much as Joni.

How much less money does Joni have than Jack?



$10 \times 3 = 30$

Jack has $30.

$30 - 10 = 20$

Joni has $20 less than Jack.

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Multiplying Ones, Tens, Hundreds and Thousands

To find the **product** of two numbers, we multiply them.

To multiply a 2-digit number by a 1-digit number,
Step 1: Multiply the ones by the 1-digit number.
Step 2: Multiply the tens by the 1-digit number.

1. Find the product of 35 and 4.

Multiply the ones by 4.

$$\begin{array}{r} {\scriptstyle 2}\,3\,5 \\ \times\quad 4 \\ \hline \mathbf{0} \end{array}$$

Multiply the tens by 4.

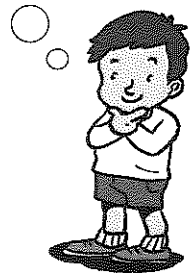
$$\begin{array}{r} {\scriptstyle 2}\,3\,5 \\ \times\quad 4 \\ \hline 1\,4\,0 \end{array}$$

30 × 4 = 120
5 × 4 = 20
35 × 4 = 120 + 20

35 × 4 = 140

The **product** of 35 and 4 is 140.





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To multiply a 3-digit number by a 1-digit number,
Step 1: Multiply the ones by the 1-digit number.
Step 2: Multiply the tens by the 1-digit number.
Step 3: Multiply the hundreds by the 1-digit number.

2. Multiply 248 by 2.

Multiply the ones by 2.

$$\begin{array}{r} {}^{1}\\ 248 \\ \times \quad 2 \\ \hline 6 \end{array}$$

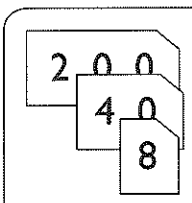
Multiply the tens by 2.

$$\begin{array}{r} {}^{1}\\ 248 \\ \times \quad 2 \\ \hline 96 \end{array}$$

Multiply the hundreds by 2.

$$\begin{array}{r} {}^{1}\\ 248 \\ \times \quad 2 \\ \hline 496 \end{array}$$

$248 \times 2 = 496$



$200 \times 2 = 400$
$40 \times 2 = 80$
$8 \times 2 = 16$
248×2
$= 400 + 80 + 16$



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er.

0
0
8
× 2

2 = 400
2 = 80
2 = 16
2
+ 80 + 16



To multiply a 4-digit number by a 1-digit number,
Step 1: Multiply the ones by the 1-digit number.
Step 2: Multiply the tens by the 1-digit number.
Step 3: Multiply the hundreds by the 1-digit number.
Step 4: Multiply the thousands by the 1-digit number.

3. Multiply 2167 by 4.

Multiply the ones by 4.

$$\begin{array}{r} {}^{2}2\,1\,6\,7 \\ \times \qquad 4 \\ \hline \mathbf{8} \end{array}$$

Multiply the tens by 4.

$$\begin{array}{r} {}^{2}2\,{}^{2}1\,6\,7 \\ \times \qquad 4 \\ \hline \mathbf{6}\,8 \end{array}$$

Multiply the hundreds by 4.

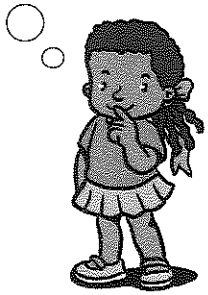
$$\begin{array}{r} {}^{2}2\,{}^{2}1\,6\,7 \\ \times \qquad 4 \\ \hline \mathbf{6}\,6\,8 \end{array}$$

Multiply the thousands by 4.

$$\begin{array}{r} {}^{2}2\,{}^{2}1\,6\,7 \\ \times \qquad 4 \\ \hline \mathbf{8}\,6\,6\,8 \end{array}$$

2167 × 4 = 8668

2 0 0 0
1 0 0
6 0
7
× 4



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We can check if our answer is reasonable by estimating the product of the numbers.



4. Estimate the product of 513 and 3.

513 is 500 rounded to the nearest hundred.



$500 \times 3 = 1500$

The product of 513 and 3 is about 1500.

Quotient and Remainder

When a number cannot be divided by another number exactly, there is a **remainder**.

$18 \div 7 = 2$ remainder 4

When 18 is divided by 7, the quotient is 2 and the remainder is 4.

$2 \times 7 = 14$
$14 + 4 = 18$



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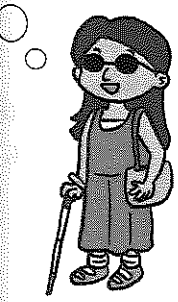
ating the



nber

remainder

= 14
= 18



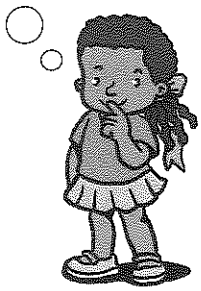
Numbers in which the ones digit is 0, 2, 4, 6 or 8 are **even numbers**. All even numbers can be divided by 2 exactly.
Numbers in which the ones digit is 1, 3, 5, 7 or 9 are **odd numbers**. All odd numbers cannot be divided by 2 exactly. There is a remainder of 1.

Divide 97 by 2.

$$\begin{array}{r} 4 \\ 2\overline{)\,9\,7} \\ 8 \\ \hline 1 \end{array}$$

4×2

9 tens ÷ 2 = 4 tens with remainder 1 ten



$$\begin{array}{r} 4\,8 \\ 2\overline{)\,9\,7} \\ 8 \\ \hline 1\,7 \\ 1\,6 \\ \hline 1 \end{array}$$

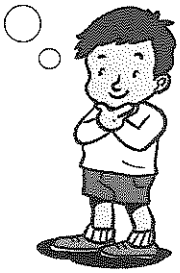
8×2

17 ones ÷ 2 = 8 ones with remainder 1 one



When 97 is divided by 2, the quotient is 48 and the remainder is 1.

$48 \times 2 = 96$
$96 + 1 = 97$

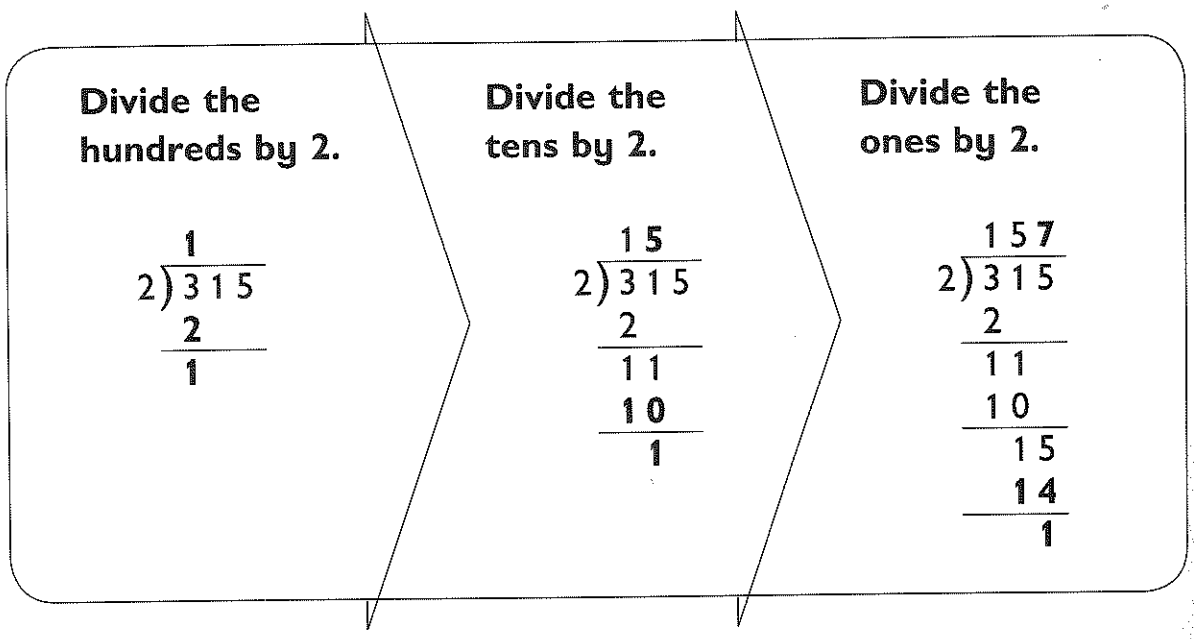


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Dividing Hundreds, Tens and Ones

To divide a 3-digit number by a 1-digit number,
Step 1: Divide the hundreds by the 1-digit number.
Step 2: Divide the tens by the 1-digit number.
Step 3: Divide the ones by the 1-digit number.

Find the value of 315 ÷ 2.



315 ÷ 2 = 157 remainder 1

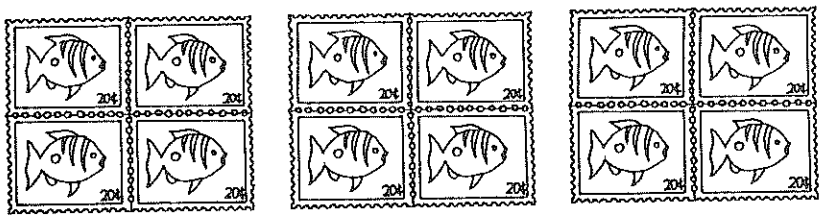
When 315 is divided by 2, the quotient is 157 and the remainder is 1.

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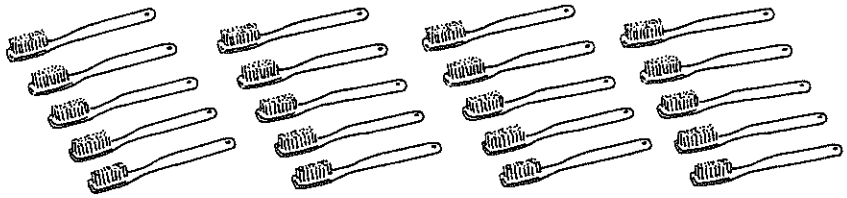
Exercise 1 : Looking Back

1. Write the numbers.



3 fours = ☐

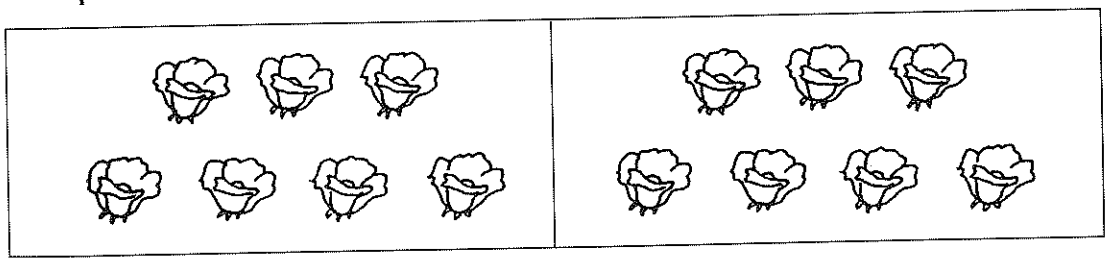
2. Write two multiplication sentences.



☐ × ☐ = ☐

☐ × ☐ = ☐

3. Complete the division sentences.

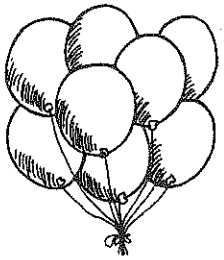
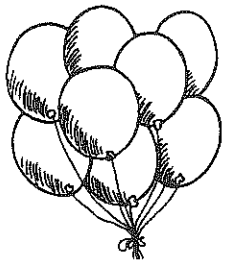
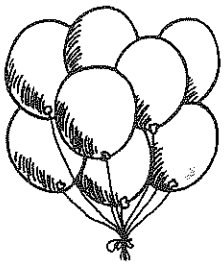


14 ÷ 2 = ☐

14 ÷ 7 = ☐

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4. Complete the number sentences.

$8 \times 3 = \square$ $\quad$ $3 \times 8 = \square$

$24 \div 3 = \square$ $\quad$ $24 \div 8 = \square$

5. Multiply.

(a) $5 \times 2 =$ $\quad$ (b) $6 \times 3 =$

(c) $4 \times 9 =$ $\quad$ (d) $10 \times 0 =$

6. Divide.

(a) $16 \div 2 =$ $\quad$ (b) $27 \div 3 =$

(c) $24 \div 4 =$ $\quad$ (d) $40 \div 5 =$

7. Complete the number sentences.

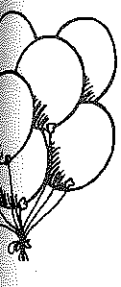
(a) $\square \times 2 = 18$ $\quad$ (b) $\square \times 3 = 21$

$18 \div 2 = \square$ $\quad$ $21 \div 3 = \square$

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Name: _____ Class: _____ Date: _____

Exercise 2 : More Word Problems



8 = ☐

8 = ☐

1. Do these. Show all your work clearly.

   (a) Mary bought 5 boxes of cake.
   Each box contained 9 pieces of cake.
   How many pieces of cake did she buy?

   (b) 32 m of cloth was cut into 4 pieces of the same length.
   How long was each piece of cloth?

   (c) There are 80 tables altogether in 8 equal rows.
   How many tables are there in each row?

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(d) James has 36 balloons.
He has 4 times as many balloons as George.
How many balloons does George have?

(e) The weight of a fish is 2 lb.
The weight of a piece of meat is 3 times as much.
What is the weight of the piece of meat?

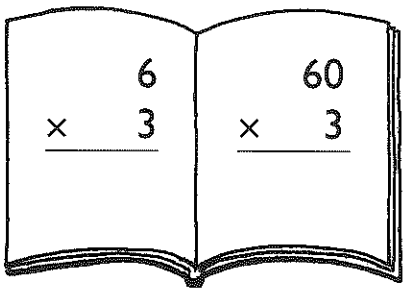
(f) Each tray can carry 8 cups.
Mary has 3 trays.
How many cups can the 3 trays carry?

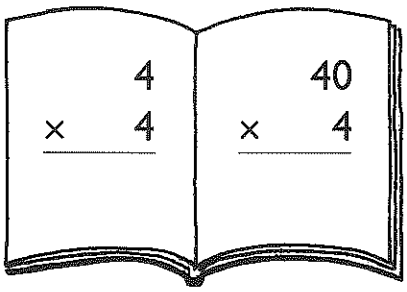
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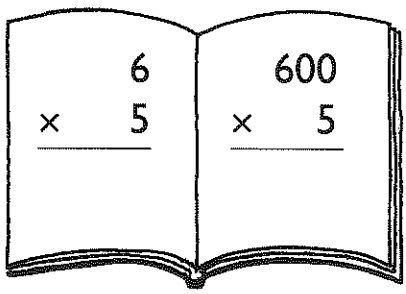
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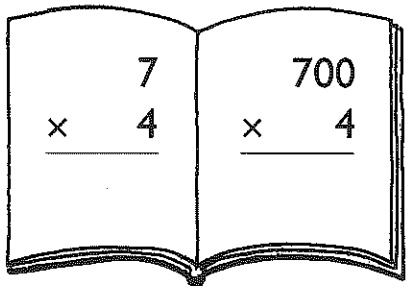
Exercise 3 : Multiplying Ones, Tens, Hundreds and Thousands

1. Multiply.

(a) 

(b) 

(c) 

(d) 

2. Multiply.

(a) 30 × 4 = _____

(b) 20 × 5 = _____

(c) 600 × 2 = _____

(d) 500 × 2 = _____

(e) 73 × 3 = _____

(f) 23 × 2 = _____

(g) 71 × 5 = _____

(h) 61 × 4 = _____

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3. Multiply.

(a) $\begin{array}{r} 136 \\ \times \quad 2 \\ \hline \end{array}$

(b) $\begin{array}{r} 219 \\ \times \quad 5 \\ \hline \end{array}$

(c) $\begin{array}{r} 348 \\ \times \quad 3 \\ \hline \end{array}$

(d) $\begin{array}{r} 625 \\ \times \quad 4 \\ \hline \end{array}$

(e) $\begin{array}{r} 795 \\ \times \quad 2 \\ \hline \end{array}$

(f) $\begin{array}{r} 957 \\ \times \quad 3 \\ \hline \end{array}$

(g) $\begin{array}{r} 1212 \\ \times \quad 4 \\ \hline \end{array}$

(h) $\begin{array}{r} 3131 \\ \times \quad 2 \\ \hline \end{array}$

(i) $\begin{array}{r} 2305 \\ \times \quad 4 \\ \hline \end{array}$

(j) $\begin{array}{r} 4746 \\ \times \quad 2 \\ \hline \end{array}$

(k) $\begin{array}{r} 1286 \\ \times \quad 5 \\ \hline \end{array}$

(l) $\begin{array}{r} 2390 \\ \times \quad 4 \\ \hline \end{array}$

4. Multiply.

(a) $63 \times 3 =$

(b) $64 \times 5 =$

(c) $72 \times 4 =$

(d) $89 \times 2 =$

(e) $207 \times 4 =$

(f) $389 \times 3 =$

(g) $423 \times 5 =$

(h) $850 \times 5 =$

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5. Do these. Show all your work clearly.

$$\begin{array}{r} 348 \\ \times \quad 3 \\ \hline \end{array}$$

(a) There are 346 pages in a book.
How many pages are there in 2 such books?

$$\begin{array}{r} 957 \\ \times \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2305 \\ \times \quad 4 \\ \hline \end{array}$$

(b) Container A can hold 125 pints of water
Container B can hold 5 times as much water.
How many pints of water can Container B hold?

$$\begin{array}{r} 2390 \\ \times \quad 4 \\ \hline \end{array}$$

(c) Adam has 63 stickers.
Sara has 4 times as many stickers as Adam.
How many more stickers does Sara have than Adam?

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(d) Mrs. Watts baked 2136 apple pies.
Mrs. Li baked twice as many apple pies as Mrs. Watts.
(i) About how many apple pies did Mrs. Li bake?
(ii) Exactly how many apple pies did Mrs. Li bake?

(e) Bobby has $3125.
Jansen has 3 times as much money as Bobby.
(i) About how much money does Jansen have?
(ii) Exactly how much money does Jansen have?

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Exercise 4 : Quotient and Remainder

1. Circle the odd numbers.

6	25	37	130	281
403	512	1358	2649	3718

2. Circle the even numbers.

7	18	29	46	318
501	360	723	2915	4816

3. Find the quotient and remainder.

(a) $2\overline{)68}$

Quotient ☐

Remainder ☐

(b) $3\overline{)46}$

Quotient ☐

Remainder ☐

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4. Do these. Show all your work clearly.

(a) Rooney has 46 apples.
He puts them in bags of 4 each.
How many bags does he use?
How many apples are left over?

(b) Each pen costs $3.
Mr. Dewar has $67.
How many pens can be buy?
How much money will he have left?

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Exercise 5 : Dividing Hundreds, Tens and Ones

1. Divide.

(a) $80 \div 10 =$

(b) $120 \div 10 =$

(c) $378 \div 10 =$

(d) $503 \div 10 =$

2. Find the quotient and remainder.

(a) $4 \overline{)926}$

Quotient ☐

Remainder ☐

(b) $3 \overline{)641}$

Quotient ☐

Remainder ☐

(c) $5 \overline{)609}$

Quotient ☐

Remainder ☐

(d) $2 \overline{)857}$

Quotient ☐

Remainder ☐

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3. Divide.

(a) $5\overline{)43}$	(b) $4\overline{)68}$	(c) $2\overline{)71}$	(d) $5\overline{)99}$
(e) $3\overline{)81}$	(f) $10\overline{)54}$	(g) $3\overline{)309}$	(h) $2\overline{)530}$
(i) $5\overline{)525}$	(j) $4\overline{)735}$	(k) $3\overline{)722}$	(l) $10\overline{)240}$

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(d)

$5 \overline{)\ 99}$

(h)

$2 \overline{)\ 530}$

(l)

$10 \overline{)\ 240}$

4. Do these. Show all your work clearly.

(a) A taxi can carry 4 passengers.
How many taxis are needed to carry 144 passengers?

(b) Pablo had 105 apples.
He put 5 apples in one bag.
How many bags did he use to put all the apples?

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(c) Ali had 365 eggs.
He put 8 eggs in each basket.
How many baskets did he use?
How many eggs were left over?

(d) 574 chairs were arranged in 5 rows in a hall.
How many chairs were there in each row?
How many chairs were left over?

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Unit 4 : Multiplying and Dividing by 6, 7, 8 and 9

Friendly Notes

Multiplying and Dividing by 6

Remembering the multiplication table of 6 shown below helps us to multiply and divide by 6 easily.

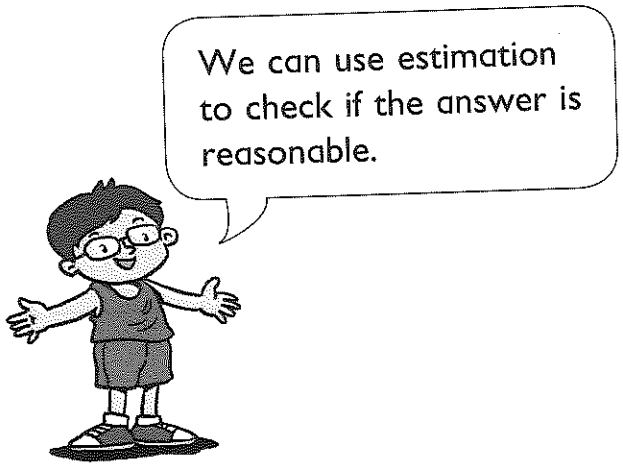
$1 \times 6 = \mathbf{6}$ $6 \div 6 = 1$	
$2 \times 6 = \mathbf{12}$ $12 \div 6 = 2$	
$3 \times 6 = \mathbf{18}$ $18 \div 6 = 3$	
$4 \times 6 = \mathbf{24}$ $24 \div 6 = 4$	
$5 \times 6 = \mathbf{30}$ $30 \div 6 = 5$	
$6 \times 6 = \mathbf{36}$ $36 \div 6 = 6$	
$7 \times 6 = \mathbf{42}$ $42 \div 6 = 7$	
$8 \times 6 = \mathbf{48}$ $48 \div 6 = 8$	
$9 \times 6 = \mathbf{54}$ $54 \div 6 = 9$	
$10 \times 6 = \mathbf{60}$ $60 \div 6 = 10$	

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1. Multiply 532 by 6.

	Multiply the ones by 6.	Multiply the tens by 6.	Multiply the hundreds by 6.
$\begin{array}{r} 5\,3\,2 \\ \times\quad 6 \\ \hline \square \end{array}$	$\begin{array}{r} {}^{1} \\ 5\,3\,2 \\ \times\quad 6 \\ \hline 2 \end{array}$	$\begin{array}{r} {}^{1}\,{}^{1} \\ 5\,3\,2 \\ \times\quad 6 \\ \hline 9\,2 \end{array}$	$\begin{array}{r} {}^{1}\,{}^{1} \\ 5\,3\,2 \\ \times\quad 6 \\ \hline 3\,1\,9\,2 \end{array}$

When 532 is multiplied by 6, the product is 3192.



532 is 500 rounded to the nearest hundred.

$500 \times 6 = 3000$

3192 is close to 3000.

So, the answer is reasonable.

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Multiply the hundreds by 6.

$$\begin{array}{r} {\scriptstyle 1\ \ 1} \\ 532 \\ \times\quad 6 \\ \hline 3192 \end{array}$$

92.

2. Divide 697 by 6.

	Divide the hundreds by 6.	Divide the tens by 6.	Divide the ones by 6.
$6\overline{)697}$	$\begin{array}{r} 1 \\ 6\overline{)697} \\ \underline{6} \\ 0 \end{array}$ ⇨	$\begin{array}{r} 11 \\ 6\overline{)697} \\ \underline{6} \\ 09 \\ \underline{6} \\ 3 \end{array}$ ⇨	$\begin{array}{r} 116 \\ 6\overline{)697} \\ \underline{6} \\ 09 \\ \underline{6} \\ 37 \\ \underline{36} \\ 1 \end{array}$

When 697 is divided by 6, the quotient is 116 and the remainder is 1.

3. Divide 8016 by 6.

	Divide the thousands by 6.	Divide the hundreds by 6.	Divide the tens by 6.	Divide the ones by 6.
$6\overline{)8016}$	$\begin{array}{r} 1 \\ 6\overline{)8016} \\ \underline{6} \\ 2 \end{array}$ ⇨	$\begin{array}{r} 13 \\ 6\overline{)8016} \\ \underline{6} \\ 20 \\ \underline{18} \\ 2 \end{array}$ ⇨	$\begin{array}{r} 133 \\ 6\overline{)8016} \\ \underline{6} \\ 20 \\ \underline{18} \\ 21 \\ \underline{18} \\ 3 \end{array}$ ⇨	$\begin{array}{r} 1336 \\ 6\overline{)8016} \\ \underline{6} \\ 20 \\ \underline{18} \\ 21 \\ \underline{18} \\ 36 \\ \underline{36} \\ 0 \end{array}$

When 8016 is divided by 6, the quotient is 1336 and the remainder is 0.

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Multiplying and Dividing by 7

Remembering the multiplication table of 7 shown below helps us to multiply and divide by 7 easily.

$1 \times 7 = \mathbf{7}$ $7 \div 7 = 1$	
$2 \times 7 = \mathbf{14}$ $14 \div 7 = 2$	
$3 \times 7 = \mathbf{21}$ $21 \div 7 = 3$	
$4 \times 7 = \mathbf{28}$ $28 \div 7 = 4$	
$5 \times 7 = \mathbf{35}$ $35 \div 7 = 5$	
$6 \times 7 = \mathbf{42}$ $42 \div 7 = 6$	
$7 \times 7 = \mathbf{49}$ $49 \div 7 = 7$	
$8 \times 7 = \mathbf{56}$ $56 \div 7 = 8$	
$9 \times 7 = \mathbf{63}$ $63 \div 7 = 9$	
$10 \times 7 = \mathbf{70}$ $70 \div 7 = 10$	

$10 \times 7 = 70$
$9 \times 7 = 70 - 7$



$10 \times 7 = 70$
$2 \times 7 = 14$
$8 \times 7 = 70 - 14$

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n below helps

= 70
= 14
= 70 – 14

Solve these.

(a) There are 7 days in a week.
How many days are there in 28 weeks?

$28 \times 7 = 196$

$$\begin{array}{r} {\scriptstyle 5}\,2\,8 \\ \times\quad 7 \\ \hline 1\,9\,6 \end{array}$$

There are 196 days in 28 weeks.

28 is 30 rounded to the nearest ten.
$30 \times 7 = 210$
196 is close to 210.
The answer is reasonable.



(b) 789 chairs were arranged in 7 rows in a hall.
How many chairs were there in each row?
How many chairs were left?

$789 \div 7 = 112$ R 5

$$\begin{array}{r} 112 \\ 7\overline{)789} \\ \underline{7} \\ 08 \\ \underline{7} \\ 19 \\ \underline{14} \\ 5 \end{array}$$

There were 112 chairs in each row.
5 chairs were left.

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Multiplying and Dividing by 8

Remembering the multiplication table of 8 shown below helps us to multiply and divide by 8 easily.

$1 \times 8 = \mathbf{8}$ $8 \div 8 = 1$	
$2 \times 8 = \mathbf{16}$ $16 \div 8 = 2$	
$3 \times 8 = \mathbf{24}$ $24 \div 8 = 3$	
$4 \times 8 = \mathbf{32}$ $32 \div 8 = 4$	
$5 \times 8 = \mathbf{40}$ $40 \div 8 = 5$	
$6 \times 8 = \mathbf{48}$ $48 \div 8 = 6$	
$7 \times 8 = \mathbf{56}$ $56 \div 8 = 7$	
$8 \times 8 = \mathbf{64}$ $64 \div 8 = 8$	
$9 \times 8 = \mathbf{72}$ $72 \div 8 = 9$	
$10 \times 8 = \mathbf{80}$ $80 \div 8 = 10$	

$10 \times 8 = 80$
$9 \times 8 = 80 - 8$



$5 \times 8 = 40$
$6 \times 8 = 40 + 8$

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below helps

40
40 + 8

Solve these.

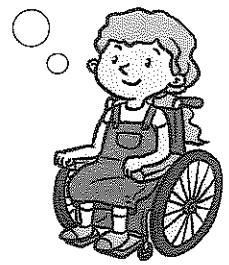
(a) The capacity of a container is 8 quarts.
What is the total capacity of 32 such containers?

$32 \times 8 = 256$

$$\begin{array}{r} {\scriptstyle 1}\,3\,2 \\ \times\quad 8 \\ \hline 2\,5\,6 \end{array}$$

The total capacity of 32 such containers is 256 quarts.

32 is 30 rounded to the nearest ten.
$30 \times 8 = 240$
240 is close to the answer.
So, the answer is reasonable.



(b) A fruit seller had 1605 oranges.
He packed them into 8 boxes equally.
How many oranges did he put into each box?
How many oranges were left over?

$1605 \div 8 = 200$ R 5

$$\begin{array}{r} 200 \\ 8\overline{)1605} \\ 16 \\ \hline 005 \end{array}$$

He put 200 oranges into each box.
5 oranges were left over.

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Multiplying and Dividing by 9

Remembering the multiplication table of 9 shown below helps us to multiply and divide by 9 easily.

$1 \times 9 = \mathbf{9}$ $9 \div 9 = 1$	
$2 \times 9 = \mathbf{18}$ $18 \div 9 = 2$	
$3 \times 9 = \mathbf{27}$ $27 \div 9 = 3$	
$4 \times 9 = \mathbf{36}$ $36 \div 9 = 4$	
$5 \times 9 = \mathbf{45}$ $45 \div 9 = 5$	
$6 \times 9 = \mathbf{54}$ $54 \div 9 = 6$	
$7 \times 9 = \mathbf{63}$ $63 \div 9 = 7$	
$8 \times 9 = \mathbf{72}$ $72 \div 9 = 8$	
$9 \times 9 = \mathbf{81}$ $81 \div 9 = 9$	
$10 \times 9 = \mathbf{90}$ $90 \div 9 = 10$	

If the sum of the digits in a number is 9, the number can be divided by 9 exactly.
$243 \div 9 = 27$
$2 + 4 + 3 = 9$



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below helps

Solve these.

(a) Ronnie has 2389 marbles.
He puts 9 marbles in each container.
How many containers does he need?
How many marbles are left over?

$2389 \div 9 = 265$ R 4

$$\begin{array}{r} 265 \\ 9\overline{)2389} \\ 18 \\ \hline 58 \\ 54 \\ \hline 49 \\ 45 \\ \hline 4 \end{array}$$

He needs 265 boxes.
4 marbles are left over.

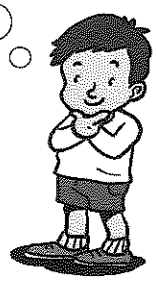
(b) Mary sold 118 funfair tickets at \$9 each.
How much did she sell all the tickets for?

$118 \times 9 = 1062$

$$\begin{array}{r} {\scriptstyle 1\ 7}\ 118 \\ \times \quad 9 \\ \hline 1062 \end{array}$$

She sold all the tickets for \$1062.

118 is 100 rounded to the nearest hundred.
$100 \times 9 = 900$
1062 is close to 900.
The answer is reasonable.



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More Multiplication and Division

1. Find the value of $7 \times 10 \times 12$.

   $7 \times 10 \times 12 = 7 \times 12 \times 10$

   $84 \times 10 = 840$

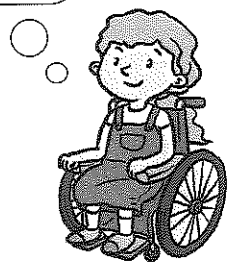
   $7 \times 10 \times 12 = 840$



2. Find the value of $3000 \div 6$.

   $3000 \div 6 = 500$

$30 \div 6 = 5$
$300 \div 6 = 50$
$3000 \div 6 = 500$

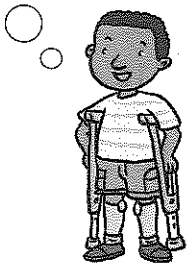


3. Estimate the value of $2389 \div 5$.

   $2500 \div 5 = 500$

   The value of $2389 \div 5$ is about 500.

2398 $\div 5$
$4 \times 5 = 20$
$5 \times 5 = 25$
23 is closer to 25 than 20.



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by 12 first.



than 20.





Name: _____ Class: _____ Date: _____

Exercise 1 : Multiplying and Dividing by 6

1. Match.

3×6	6	6×8
7×6	18	6×9
10×6	24	6×4
1×6	36	6×6
	42	
	48	
	54	
	60	

2. Match.

$60 \div 6$	1	$36 \div 6$
$12 \div 6$	2	$48 \div 6$
$54 \div 6$	3	$6 \div 6$
$30 \div 6$	5	$18 \div 6$
	6	
	8	
	9	
	10	

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3. Multiply.

(a) $\begin{array}{r} 21 \\ \times\ 6 \\ \hline \end{array}$

(b) $\begin{array}{r} 34 \\ \times\ 6 \\ \hline \end{array}$

(c) $\begin{array}{r} 45 \\ \times\ 6 \\ \hline \end{array}$

(d) $\begin{array}{r} 258 \\ \times\ 6 \\ \hline \end{array}$

(e) $\begin{array}{r} 370 \\ \times\ 6 \\ \hline \end{array}$

(f) $\begin{array}{r} 432 \\ \times\ 6 \\ \hline \end{array}$

(g) $\begin{array}{r} 505 \\ \times\ 6 \\ \hline \end{array}$

(h) $\begin{array}{r} 600 \\ \times\ 6 \\ \hline \end{array}$

(i) $\begin{array}{r} 713 \\ \times\ 6 \\ \hline \end{array}$

(j) $\begin{array}{r} 770 \\ \times\ 6 \\ \hline \end{array}$

(k) $\begin{array}{r} 906 \\ \times\ 6 \\ \hline \end{array}$

(l) $\begin{array}{r} 954 \\ \times\ 6 \\ \hline \end{array}$

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45
× 6

432
× 6

713
× 6

954
× 6

4. Divide.

(a) $6\overline{)49}$	(b) $6\overline{)68}$	(c) $6\overline{)72}$
(d) $6\overline{)78}$	(e) $6\overline{)84}$	(f) $6\overline{)96}$
(g) $6\overline{)258}$	(h) $6\overline{)300}$	(i) $6\overline{)390}$
(j) $6\overline{)500}$	(k) $6\overline{)552}$	(l) $6\overline{)537}$

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5. Do these. Show all your work clearly.

(a) 274 cupcakes were shared equally among 6 classes.
How many cupcakes did each class get?
How many cupcakes were left over?

(b) Sean earned $732 in one month.
How much money did he earn in half a year?

(c) Lily saved $180 in half a year.
If she saved the same amount each month, how much did she save in 5 months?

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g 6 classes.

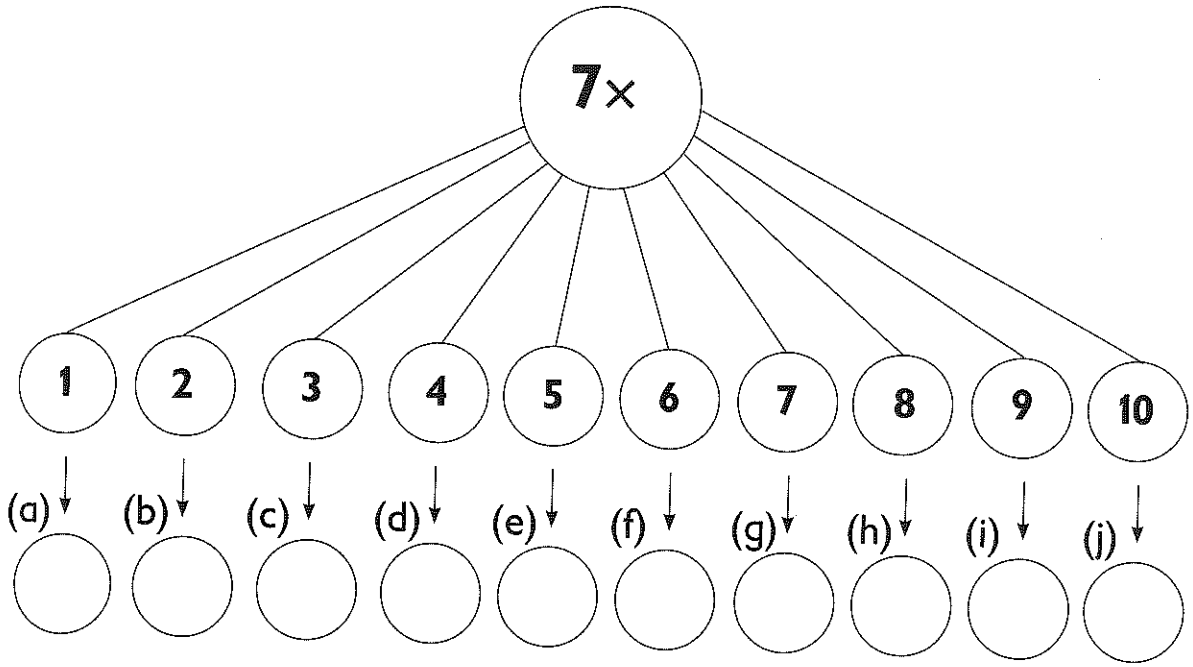
year?

nth, how much

Name: _____ Class: _____ Date: _____

Exercise 2 : Multiplying and Dividing by 7

1. Multiply.



2. Match.

35 ÷ 7 | 7 ÷ 7 | 56 ÷ 7 | 70 ÷ 7 | 49 ÷ 7

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

28 ÷ 7 | 14 ÷ 7 | 21 ÷ 7 | 63 ÷ 7 | 42 ÷ 7

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3. Multiply.

(a) $\begin{array}{r} 20 \\ \times \quad 7 \\ \hline \end{array}$

(b) $\begin{array}{r} 67 \\ \times \quad 7 \\ \hline \end{array}$

(c) $\begin{array}{r} 79 \\ \times \quad 7 \\ \hline \end{array}$

(d) $\begin{array}{r} 94 \\ \times \quad 7 \\ \hline \end{array}$

(e) $\begin{array}{r} 203 \\ \times \quad 7 \\ \hline \end{array}$

(f) $\begin{array}{r} 356 \\ \times \quad 7 \\ \hline \end{array}$

(g) $\begin{array}{r} 500 \\ \times \quad 7 \\ \hline \end{array}$

(h) $\begin{array}{r} 614 \\ \times \quad 7 \\ \hline \end{array}$

(i) $\begin{array}{r} 849 \\ \times \quad 7 \\ \hline \end{array}$

4. Divide.

(a)	(b)	(c)	(d)
$7\overline{)53}$	$7\overline{)64}$	$7\overline{)72}$	$7\overline{)77}$

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(e) $7 \overline{)252}$	(f) $7 \overline{)280}$	(g) $7 \overline{)413}$	(h) $7 \overline{)705}$
(i) $7 \overline{)728}$	(j) $7 \overline{)847}$	(k) $7 \overline{)875}$	(l) $7 \overline{)960}$

5. Do these. Show all your work clearly.

(a) There are 105 pages in a book.
Aminah read 7 pages in one day.
How many days did she take to finish reading the book?

$$\begin{array}{r} 79 \\ \times \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} 356 \\ \times \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} 849 \\ \times \quad 7 \\ \hline \end{array}$$

(d) $7 \overline{)77}$

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(b) There are 89 marbles in a bag.
There are 7 times as many marbles in a box.
How many marbles are there in the box?

(c) Mrs. Kim bought 7 toys.
Each toy cost $68.
She had $100 left after paying for the toys.
How much did she have at first?

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Name: _____ Class: _____ Date: _____

Exercise 3 : Multiplying and Dividing by 8

1. Match.

3 × 8	16	40 ÷ 8
	72	
9 × 8	5	32 ÷ 8
	6	
6 × 8	24	48 ÷ 8
	48	
5 × 8	4	64 ÷ 8
	2	
7 × 8	40	16 ÷ 8
	9	
	8	
2 × 8	56	72 ÷ 8

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2. Multiply.

(a) $\begin{array}{r} 13 \\ \times \quad 8 \\ \hline \end{array}$

(b) $\begin{array}{r} 24 \\ \times \quad 8 \\ \hline \end{array}$

(c) $\begin{array}{r} 35 \\ \times \quad 8 \\ \hline \end{array}$

(d) $\begin{array}{r} 42 \\ \times \quad 8 \\ \hline \end{array}$

(e) $\begin{array}{r} 68 \\ \times \quad 8 \\ \hline \end{array}$

(f) $\begin{array}{r} 79 \\ \times \quad 8 \\ \hline \end{array}$

(g) $\begin{array}{r} 104 \\ \times \quad 8 \\ \hline \end{array}$

(h) $\begin{array}{r} 216 \\ \times \quad 8 \\ \hline \end{array}$

(i) $\begin{array}{r} 358 \\ \times \quad 8 \\ \hline \end{array}$

(j) $\begin{array}{r} 370 \\ \times \quad 8 \\ \hline \end{array}$

(k) $\begin{array}{r} 421 \\ \times \quad 8 \\ \hline \end{array}$

(l) $\begin{array}{r} 609 \\ \times \quad 8 \\ \hline \end{array}$

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(c) 35 × 8

(f) 79 × 8

(i) 358 × 8

( ) 609 × 8

3. Divide.

(a) $8\overline{)37}$	(b) $8\overline{)64}$	(c) $8\overline{)75}$
(d) $8\overline{)88}$	(e) $8\overline{)94}$	(f) $8\overline{)98}$
(g) $8\overline{)106}$	(h) $8\overline{)200}$	(i) $8\overline{)376}$
(j) $8\overline{)508}$	(k) $8\overline{)670}$	(l) $8\overline{)752}$

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4. Do these. Show all your work clearly.

(a) There are 12 bottles of ink in one box.
How many bottles of ink are there in 8 boxes?

(b) There are 28 stamps on one page of an album.
How many stamps are there on 8 pages?

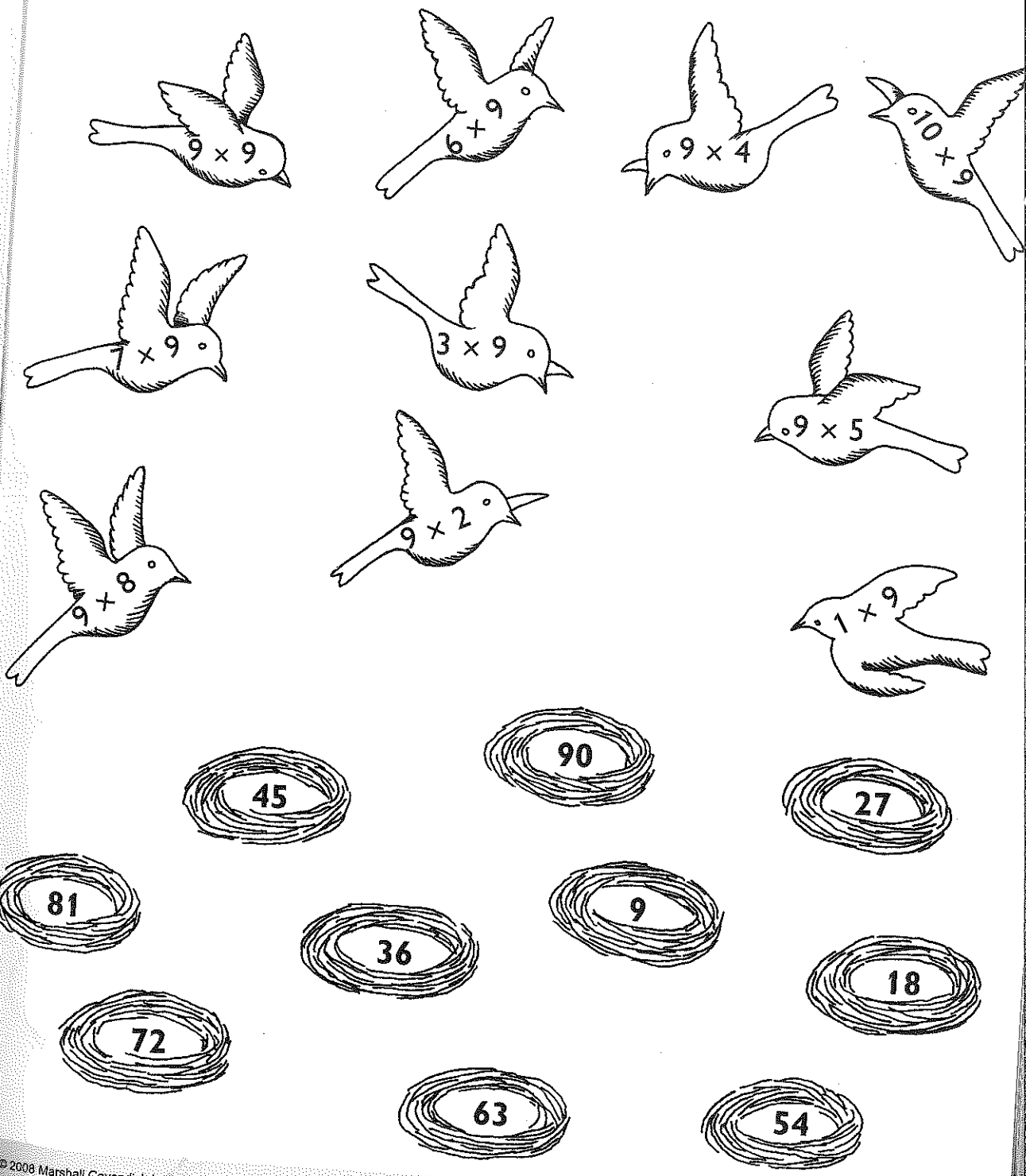
(c) Matthew bought 6 bags of beads.
Each bag contained 100 beads.
He repacked them into packages of 8 each.
How many packages did he get?

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Name: _____ Class: _____ Date: _____

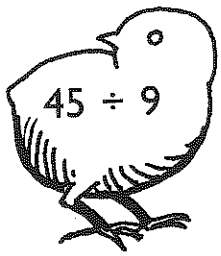
Exercise 4 : Multiplying and Dividing by 9

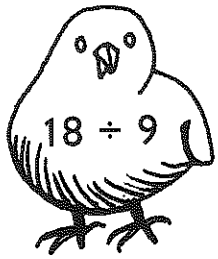
1. Match.

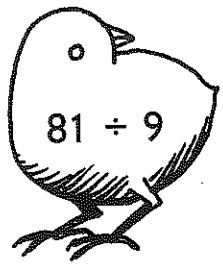


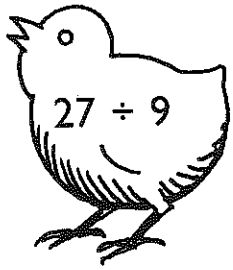
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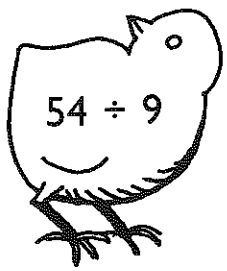
2. Match.











1

2

3

4

5

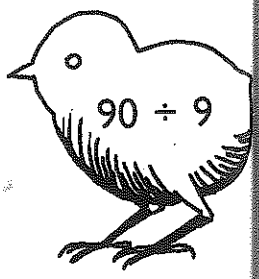
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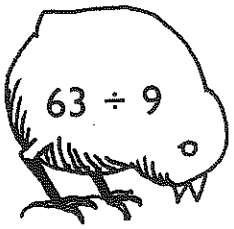
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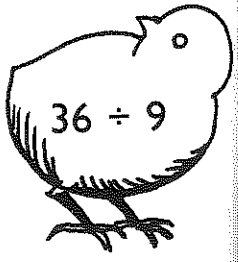
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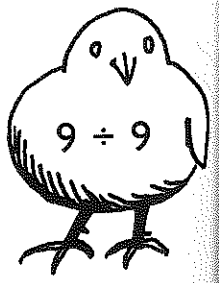
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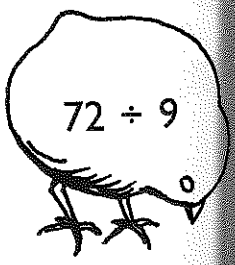
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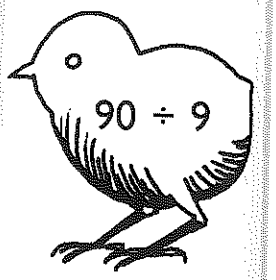


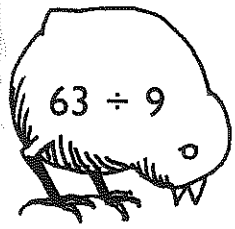


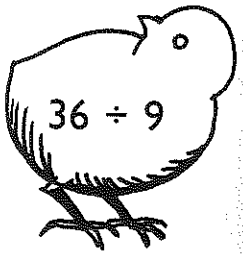


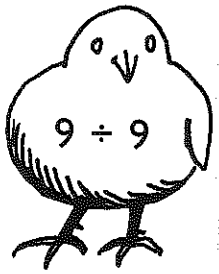


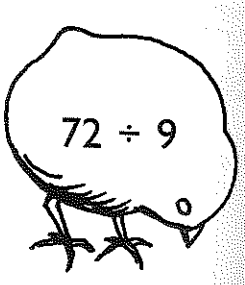
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3. Multiply.

(a) $\begin{array}{r} 55 \\ \times \quad 9 \\ \hline \end{array}$

(b) $\begin{array}{r} 60 \\ \times \quad 9 \\ \hline \end{array}$

(c) $\begin{array}{r} 72 \\ \times \quad 9 \\ \hline \end{array}$

(d) $\begin{array}{r} 570 \\ \times \quad 9 \\ \hline \end{array}$

(e) $\begin{array}{r} 736 \\ \times \quad 9 \\ \hline \end{array}$

(f) $\begin{array}{r} 827 \\ \times \quad 9 \\ \hline \end{array}$

4. Divide.

(a) $9\overline{)76}$	(b) $9\overline{)83}$	(c) $9\overline{)90}$
(d) $9\overline{)550}$	(e) $9\overline{)702}$	(f) $9\overline{)828}$

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5. Do these. Show all your work clearly.

(a) Mark worked for 9 days.
He was paid $495 altogether.
How much was he paid each day?

(b) Miss Meyer saves $105 per month.
How much does she save in 9 months?

(c) Melissa had 315 stamps.
She gave 45 stamps away and kept the rest in an album.
If one page of the album can contain 9 stamps, how many pages would be needed to contain the rest of the stamps?

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Name: _____ Class: _____ Date: _____

Exercise 5 : More Multiplication and Division

1. Fill in the boxes.

   (a) $50 \times 8 \times 4 = \square$

   (b) $25 \times 7 \times 10 = \square$

2. Find the missing numbers.

   (a) $4 \times 6 \times 8 = \square \times 4 \times 6$

   (b) $5 \times 3 \times 2 = 2 \times 5 \times \square$

   (c) $8 \times 5 \times 6 = 6 \times \square$

   (d) $6 \times 9 \times 5 = \square \times 3$

   (e) $20 \times 7 \times 5 = 100 \times \square$

3. Fill in the boxes.

   (a) $9 \div 3 = \square$

   $90 \div 3 = \square$

   $900 \div 3 = \square$

   $9000 \div 3 = \square$

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(b) $8 \div 4 =$ ☐

$80 \div 4 =$ ☐

$800 \div 4 =$ ☐

$8000 \div 4 =$ ☐

4. Fill in the boxes.

(a) Estimate the value of $472 \div 5$.

☐ $\div 5 =$ ☐

The value of $472 \div 5$ is about ☐.

(b) Estimate the value of $1637 \div 6$.

☐ $\div 6 =$ ☐

The value of $1637 \div 6$ is about ☐.

(c) Estimate the value of $2580 \div 4$.

☐ $\div 4 =$ ☐

The value of $2580 \div 4$ is about ☐.

$2580 \div 4 =$ ☐

The actual quotient is ☐ to the estimate.

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Unit 5 : Data Analysis

Friendly Notes

Presenting Data

We can present data in the form of a table, bar graph, tally chart or line plot.

Mrs. Li took a survey of the favorite fruits of the students in her class.

She presented the results of her survey in a table as shown below.

Favorite fruit	Number of students
Banana	5
Pear	8
Apple	10
Orange	14
Grapefruit	3

From the table,

(a) the greatest number of students like oranges.

(b) the least number of students like grapefruits.

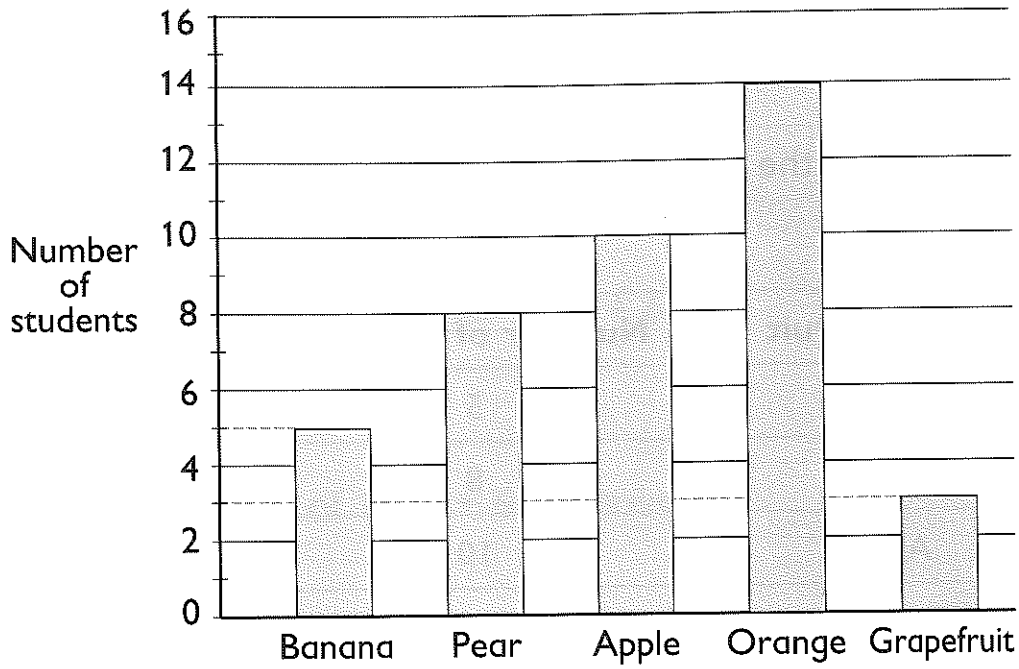
(c) 5 + 8 + 10 + 14 + 3 = 40
There are 40 students in the class.

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The results of the survey can also be presented in a bar graph as shown below.



Favorite fruit	Number of students
Banana	5
Pear	8
Apple	10
Orange	14
Grapefruit	3



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n a bar graph

Grapefruit

A survey was carried out to find the number of pets in each family. The data collected is shown below.

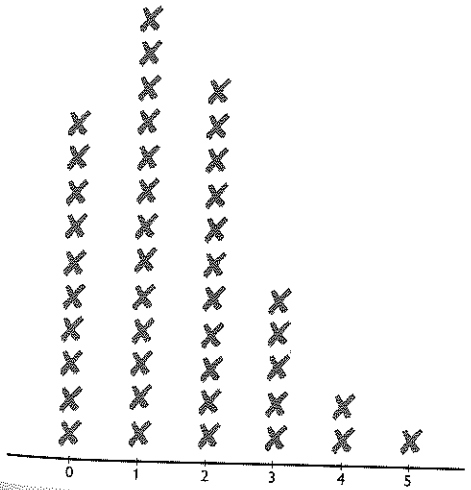
0	2	2	1	1	0	3
5	4	2	2	1	3	3
0	0	0	1	1	1	1
2	1	1	4	2	0	0
2	2	1	3	1	0	0
0	2	1	1	3	2	2

The results of the survey can be presented in a tally chart as shown below.

Number of pets in the family	Number of families	
0	𝍸 𝍸	10
1	𝍸 𝍸 ///	13
2	𝍸 𝍸 /	11
3	𝍸	5
4	//	2
5	/	1



The results of the survey can also be presented in a line plot as shown below.





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Probability

Probability is a measure of the chances of an event happening.
An event is certain if it always happens.
An event is impossible if it never happens.
A likely event has a good chance of happening.
An unlikely event does not have a good chance of happening.

Certain event:
The sun rises in the east and sets in the west.

Impossible event:
An ostrich egg hatches into a baby crocodile.

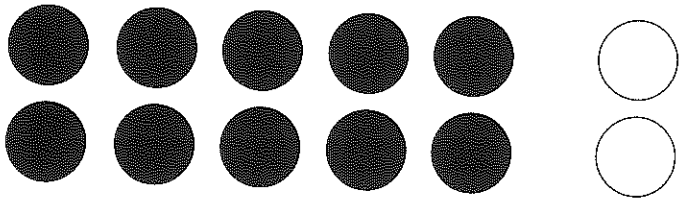
Likely event:
Children's day falls on a Sunday.

Unlikely event:
Students mark test papers done by teachers.



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1. There are 10 black balls and 2 white balls in a bag.
John picks a ball from the bag without looking.



(a) There are more black balls than white balls.
John is likely to pick a black ball.

(b) There are no green balls, so it is impossible to pick a green ball.

2. Alice rolled a regular six-sided die.
She recorded her results in a tally chart as shown below.

1	2	3	4	5	6
𝍸 /	𝍸	𝍸	𝍸	////	𝍸

(a) $6 + 5 + 5 + 5 + 4 + 5 = 30$
Alice rolled the die 30 times.

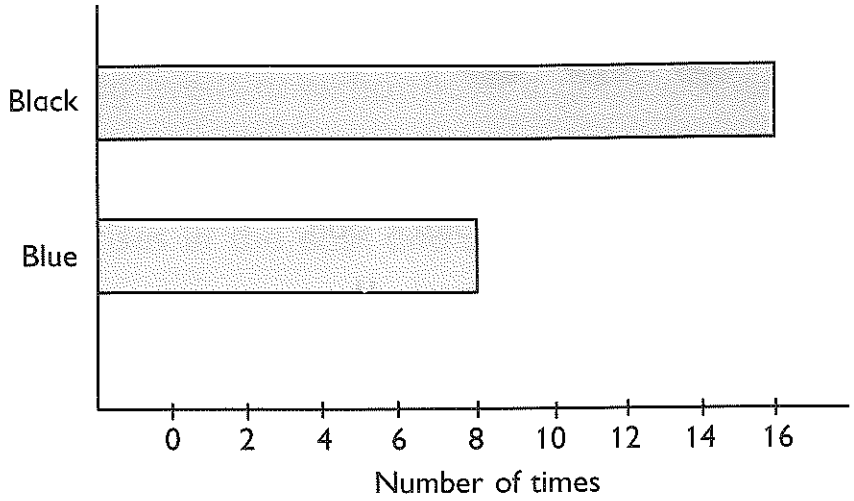
(b) She got the number 4 five times.

(c) She got the number 1 the most often.

(d) Each time Alice rolls the die, she is likely to get any one of the six numbers as she got each number almost the same number of times.

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3. The bar graph shows the number of times Jane picked a blue pen from a box without looking.
She replaced the pen each time.
She presented the results in a bar graph as shown below.



From the graph,

(a) Jane picked a black pen more often.

(b) She picked a black pen 8 times more than a blue pen.

(c) Her chances of choosing a black pen were higher. as there were more black pens in the box.

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picked a

wn below.

a blue pen.

e higher.

Name: _____ Class: _____ Date: _____

Exercise 1 : Presenting Data

1. 56 boys and 48 girls went on a field trip. 22 of the boys and 36 of the girls wore caps.

   (a) Complete the following table.

	Number of boys	Number of girls	Total number of boys and girls
Wearing caps	22	36	58
Not wearing caps			
Total number of boys and girls			

   (b) How many more boys than girls did not wear caps?

   (c) How many more girls than boys wore caps?

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2. (a) Make a table to show the following data.

Raju's score	Steve's score	Maggie's score
Science: 85	English: 68	Mathematics: 75
English: 79	Mathematics: 72	Science: 87
Mathematics: 80	Science: 80	English: 70

Using the table, answer the following questions.

(b) Who obtained the highest score in Mathematics?

_____

(c) Who obtained the least score in English?

_____

(d) Who obtained the highest score in Science?

_____

(e) How many more points did Raju score than Steve in Science?

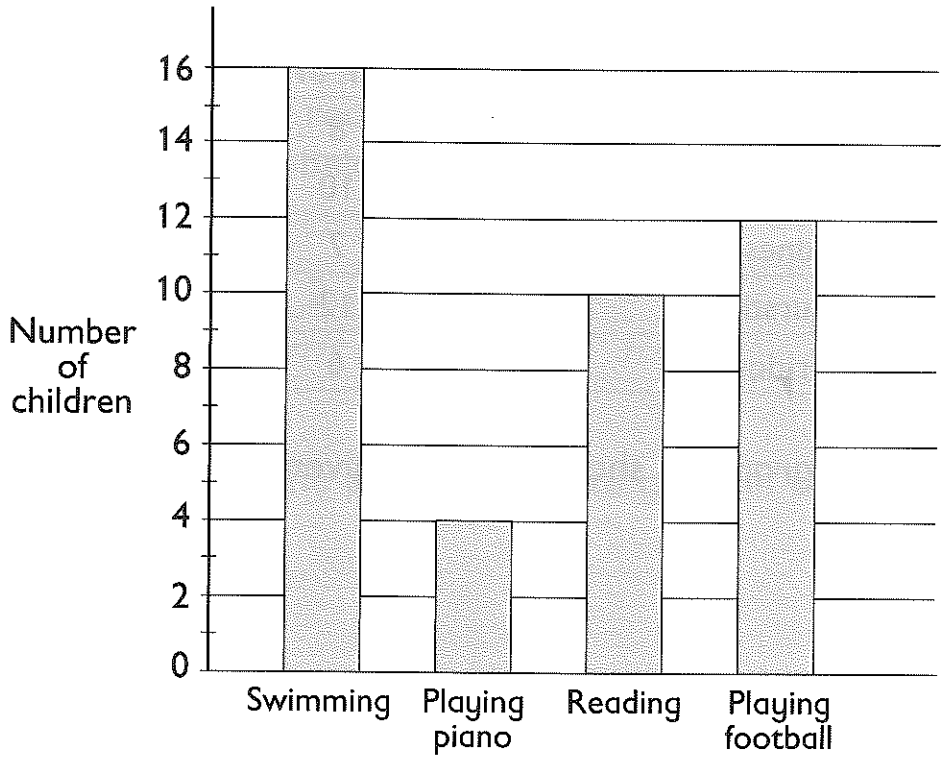
_____

(f) How many more points did Raju score than Maggie in Mathematics?

_____

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3. The bar graph shows the favorite hobby of the children in a class.



(a) Which is the most favorite hobby of the children?

_____

(b) Which is the least favorite hobby of the children?

_____

(c) How many more children prefer swimming to reading?

_____

(d) How many children are there in the class?

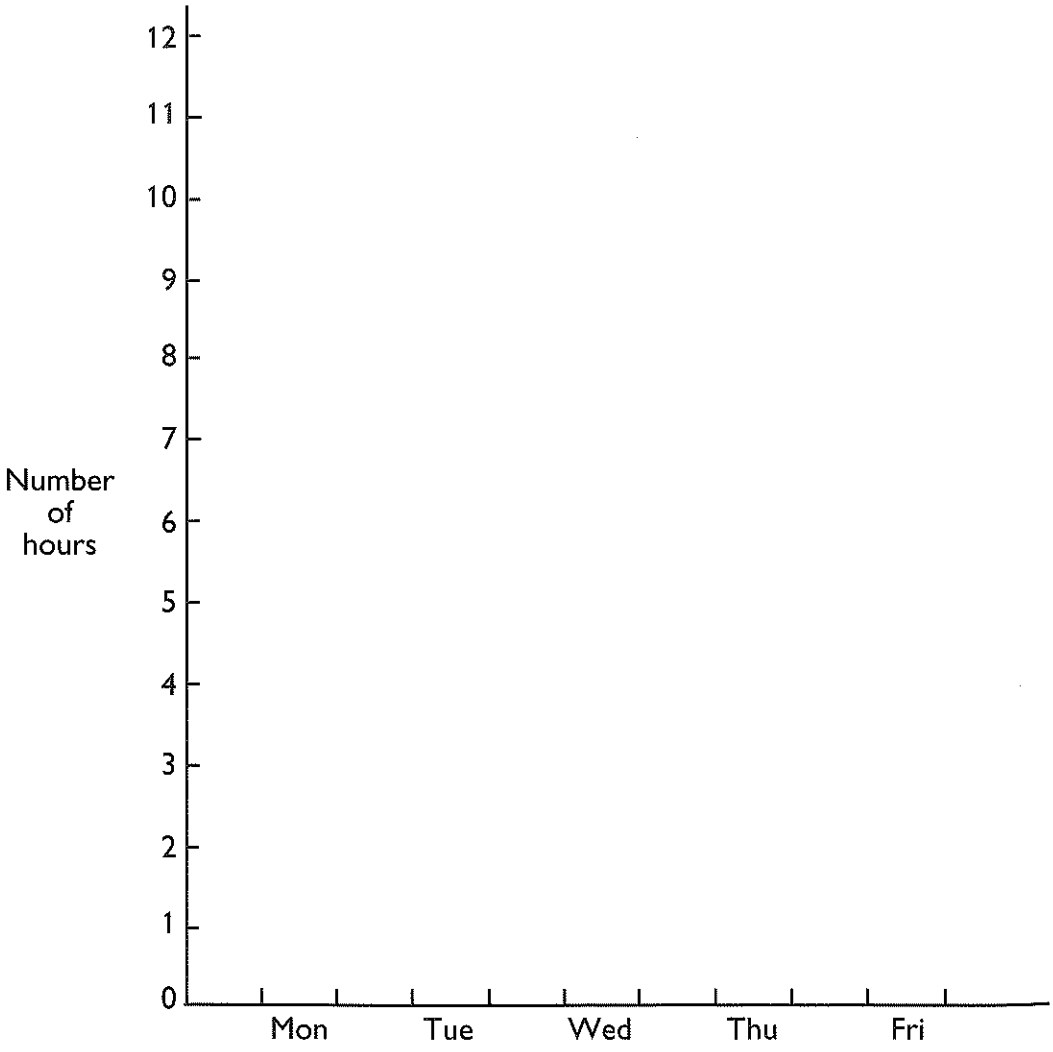
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4. The table shows the number of hours Sarah spent studying each day in a week.

Days of the week	Number of hours
Monday	8
Tuesday	10
Wednesday	7
Thursday	12
Friday	6

Draw a bar graph to show the data given in the table.



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Name: _____ Class: _____ Date: _____

Exercise 2 : Probability

1. Johnson rolls a regular six-sided die 30 times. Each time he rolls the die, he records the number on the die in a tally chart as shown below.

1	2	3	4	5	6
////	/////	///// ///	///// /	///	////

(a) Make a line plot of the data given in the tally chart.

(b) Is it likely, unlikely, certain or impossible for John to get the number 0 on the die when he rolls it?

_____

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2. Fill in the blanks.

Noah has
12 red counters,
8 blue counters,
20 yellow counters and
3 green counters.
He puts all the counters in a box.
Then he picks one counter each time without looking into the box.
He does not put the counter back into the box.

(a) Is he likely to pick a green counter?

_____

(b) Is he more likely to pick a blue counter than a red counter?

_____

(c) Is he more likely to pick a yellow counter or a blue counter?

_____

(d) Which counter is he most likely to pick?

_____

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Unit 6 : Length

Friendly Notes

Meters and Centimeters

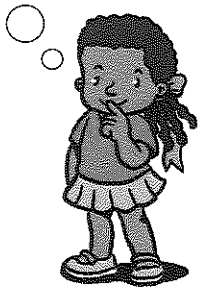
The meter (m) and centimeter (cm) are units of length.

1 m = 100 cm

1. Write 2 m 64 cm in cm.



2 m = 2 × 100 cm
= 200 cm
2 m 64 cm
= 200 cm + 64 cm



2 m 64 cm = 264 cm

2. Write 839 cm in m and cm.

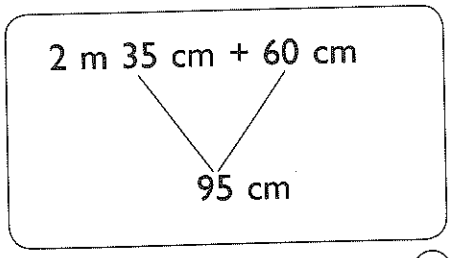
839 cm = 800 cm + 39 cm
8 m = 800 cm



839 cm = 8 m 39 cm

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3. Find the sum of 2 m 35 cm and 60 cm.



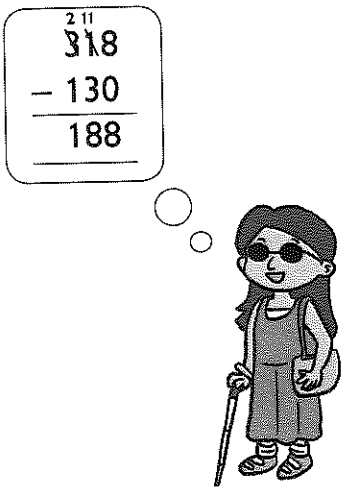
2 m 35 cm + 60 cm = 2 m 95 cm



4. Find the difference between 3 m 18 cm and 1 m 30 cm.

3 m 18 cm = 318 cm
1 m 30 cm = 130 cm

318 cm – 130 cm = 188 cm
= 1 m 88 cm



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Kilometers

The kilometer (km) is another unit of length.

We use the kilometer to measure long distances such as the length of a road or the distance we travel from one place to another.

1 km = 1000 m

1. Write 4 km 208 m in m.

4 km = 4 × 1000 m
= 4000 m
4 km 208 m
= 4000 m + 208 m



4 km 208 m = 4208 m

2. Write 7090 m in km and m.

7090 m = 7000 m + 90 m
7 km = 7000 m

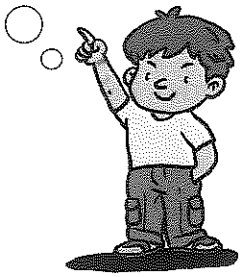


7090 m = 7 km 90 m.

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3. Find the value of 1 km 206 m + 1 km 590 m.

1 km 206 m $\xrightarrow{+ 1 \text{ km}}$ 2 km 206 m $\xrightarrow{+ 590 \text{ m}}$ 2 km 796 m



1 km 206 m + 1 km 590 m = 2 km 796 m

4. Find the value of 2 km – 1 km 207 m.

2 km – 1 km = 1 km
= 1000 m
1000 m – 207 m = 793 m



2 km – 1 km 207 m = 793 m

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Yards, Feet and Inches

The yard (yd), foot (ft) and inch (in.) are other units of length.

1 yd is shorter than a meter.

1 yd = 3 ft
1 ft = 12 in.

1. Write 12 yd in feet.

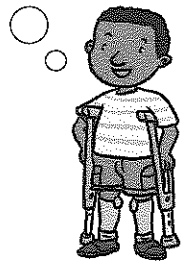
$$1 \text{ yd} = 3 \text{ ft}$$
$$12 \text{ yd} = 12 \times 3 \text{ ft}$$
$$= 36 \text{ ft}$$



12 yd = 36 ft

2. Write 15 yd 4 ft in feet.

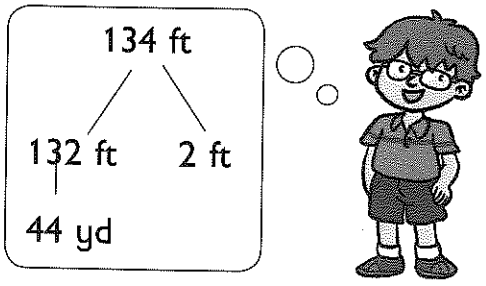
$$1 \text{ yd} = 3 \text{ ft}$$
$$15 \text{ yd} = 15 \times 3 \text{ ft}$$
$$= 45 \text{ ft}$$
$$15 \text{ yd } 4 \text{ ft} = 45 \text{ ft} + 4 \text{ ft}$$



15 yd 4 ft = 49 ft

3. Write 134 ft in yards and feet.

134 ft = 44 yd 2 ft



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4. Write 2 ft 8 in. in inches.

1 ft = 12 in.

2 ft = 2 × 12 in.
2 ft 8 in. = 24 + 8 in.
= 32 in.



2 ft 8 in. = 32 in.

5. Find the value of 2 yd 4 ft + 3 yd 5 ft in yards.

2 yd 4 ft $\xrightarrow{+ 3 \text{ yd}}$ 5 yd 4 ft $\xrightarrow{+ 5 \text{ ft}}$ 5 yd 9 ft



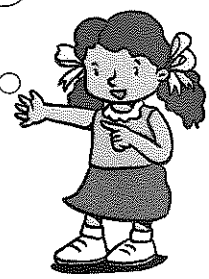
2 yd 4 ft + 3 yd 5 ft = 5 yd 9 ft
= 8 yd

1 yd = 3 ft
3 yd = 9 ft



6. Find the value of 2 ft – 9 in.

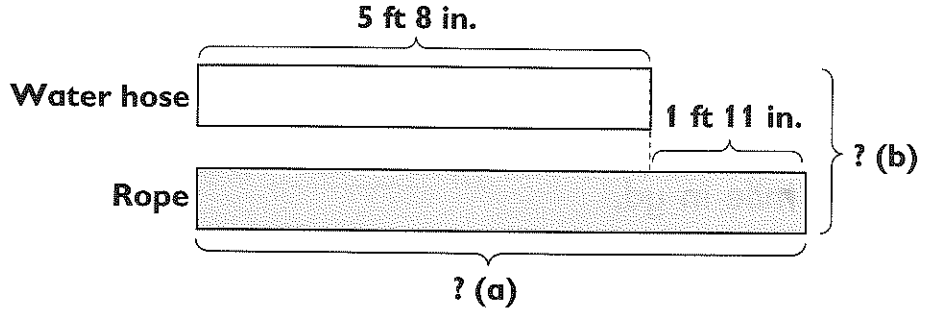
2 ft = 2 × 12 in.
= 24 in.



2 ft – 9 in. = 24 in. – 9 in.
= 15 in.

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7. A water hose is 5 ft 8 in. long.
A rope is 1 ft 11 in. longer than the water hose.
(a) Find the length of the rope.
(b) Find the total length of the water hose and the rope.



(a) 5 ft 8 in. $\xrightarrow{+\ 1\ \text{ft}}$ 6 ft 8 in. $\xrightarrow{+\ 11\ \text{in.}}$ 7 ft 7 in.

5 ft 8 in. + 1 ft 11 in. = 7 ft 7 in.

The length of the rope is 7 ft 7 in.



(b) 5 ft 8 in. $\xrightarrow{+\ 7\ \text{ft}}$ 12 ft 8 in. $\xrightarrow{+\ 7\ \text{in.}}$ 13 ft 3 in.

5 ft 8 in. + 7 ft 7 in. = 13 ft 3 in.

The total length of the water hose and the rope is 13 ft 3 in.







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Miles

The mile (mi) is another unit of length.
One mile is longer than 1 km.
We measure long distances in miles.

1 mile = 5280 ft

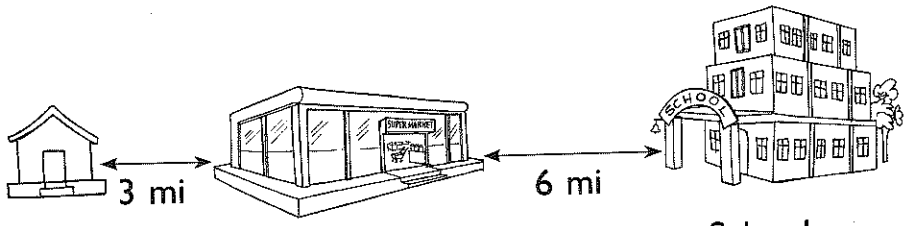
1. Write 1 mile in yd.

1 mile = 5280 ft
= 1760 yd

1 yd = 3 ft



2. Find the distance between Joshua's house and the school.



The distance between Joshua's house and the school is 9 mi.

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Name: _____ Class: _____ Date: _____

Exercise 1 : Meters and Centimeters

1. Write the missing numbers.

   (a) 4 m = _____ cm

   (b) 6 m = _____ cm

   (c) 300 cm = _____ m

   (d) 900 cm = _____ m

   (e) 1 m 10 cm = _____ cm

   (f) 5 m 31 cm = _____ cm

   (g) 723 cm = _____ m _____ cm

   (h) 48 cm + _____ cm = 1 m

   (i) 1 m − _____ cm = 25 cm

2. Fill in the missing numbers.

   (a) 7 m = _____ cm

   (b) 500 cm = _____ m

   (c) 120 cm + _____ cm = 2 m

   (d) 2 m = 1 m 62 cm + _____ cm

   (e) 1 m 55 cm + 45 cm = _____ m

   (f) 2 m 25 cm + 75 cm = _____ m

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3. Add.

(a) 2 m 77 cm + 2 m 88 cm = _____ m _____ cm

(b) 3 m 29 cm + 78 cm = _____ m _____ cm

(c) 4 m 56 cm + 3 m 48 cm = _____ m _____ cm

(d) 56 cm + 5 m 54 cm = _____ m _____ cm

(e) 3 m 8 cm + 1 m 92 cm = _____ m _____ cm

4. Subtract.

(a) 2 m 47 cm – 30 cm = _____ m _____ cm

(b) 3 m 2 cm – 2 m 3 cm = _____ m _____ cm

(c) 7 m 21 cm – 3 m 94 cm = _____ m _____ cm

(d) 4 m 34 cm – 1 m 44 cm = _____ m _____ cm

(e) 5 m 20 cm – 3 m 40 cm = _____ m _____ cm

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Name: _____ Class: _____ Date: _____

Exercise 2 : Kilometers

1. Fill in the missing numbers.

   (a) 3 km = _____ m

   (b) 10 km = _____ m

   (c) 2000 m = _____ km

   (d) 5000 m = _____ km

   (e) 1 km 305 m = _____ m

   (f) 6007 m = _____ km _____ m

2. Add or subtract.

   (a) 1 km 300 m + 400 m = _____ km _____ m

   (b) 2 km 310 m + 1 km 690 m = _____ km _____ m

   (c) 1 km 430 m – 210 m = _____ km _____ m

   (d) 4 km 8 m – 1 km 900 m = _____ km _____ m

3. Write the missing numbers.

   (a) 1 km = 350 m + _____ m

   (b) 750 m + _____ m = 1 km

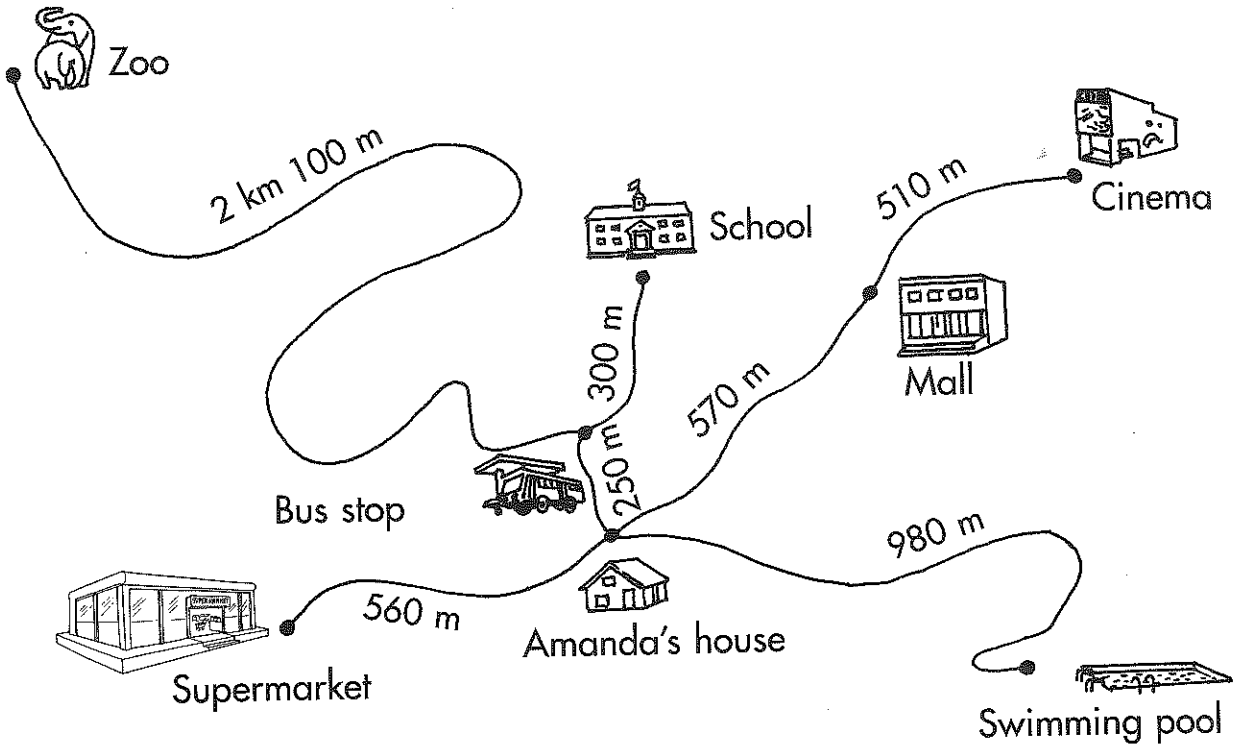
   (c) 470 m + 530 m = _____ km

   (d) 1 km – _____ m = 640 m

   (e) _____ m = 1 km – 30 m

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4. Study the map and answer the questions below.



(a) The distance from the swimming pool to the zoo is _____ km _____ m.

(b) The cinema is _____ m nearer to the mall than Amanda's house.

(c) The zoo is _____ km _____ m further from Amanda's house than the swimming pool.

(d) Amanda cycles to her school every morning and cycles back home.
She cycles _____ km _____ m altogether each day.

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Name: _____ Class: _____ Date: _____

Exercise 3 : Yards, Feet and Inches

1. Write the missing numbers.

   (a) 5 yd = _____ ft

   (b) 87 yd 2 ft = _____ ft

   (c) 308 yd 1 ft = _____ ft

   (d) 9 ft = _____ in.

   (e) 6 ft 10 in. = _____ in.

   (f) 9 ft 9 in. = _____ in.

   (g) 36 ft = _____ yd _____ ft

   (h) 110 ft = _____ yd _____ ft

   (i) 37 in. = _____ ft _____ in.

   (j) 24 in. = _____ ft _____ in.

2. Fill in the missing numbers.

   (a) 3 ft + _____ ft = 3 yd

   (b) 5 yd = 2 ft + _____ ft

   (c) 3 yd – 2 ft = _____ ft

   (d) 6 ft – 3 ft = _____ yd

   (e) 5 in. + _____ in. = 2 ft

   (f) 4 ft = 2 ft + _____ in.

   (g) 2 ft – 11 in. = _____ in.

   (h) 11 in. = _____ ft _____ in.

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3. Add.

(a) 5 yd 1 ft + 2 ft = _____ yd _____ ft

(b) 7 yd 2 ft + 2 ft = _____ yd _____ ft

(c) 6 yd 1 ft + 3 yd 2 ft = _____ yd _____ ft

(d) 5 ft 11 in. + 7 ft = _____ ft _____ in.

(e) 6 ft 6 in. + 6 in. = _____ ft _____ in.

(f) 4 ft 7 in. + 4 ft 8 in. = _____ ft _____ in.

(g) 9 in. + 2 ft 6 in. = _____ ft _____ in.

4. Subtract.

(a) 4 yd 1 ft – 2 yd = _____ yd _____ ft

(b) 7 yd 1 ft – 2 ft = _____ yd _____ ft

(c) 8 yd 1 ft – 7 yd 2 ft = _____ yd _____ ft

(d) 10 ft 10 in. – 6 in. = _____ ft _____ in.

(e) 6 ft 3 in. – 1 ft 6 in. = _____ ft _____ in.

(f) 3 ft 8 in. – 2 ft 10 in. = _____ ft _____ in.

(g) 1 ft 5 in. – 11 in. = _____ ft _____ in.

5. Fill in the missing numbers.

(a) 3 yd 1 ft + _____ ft = 4 yd

(b) _____ ft = 7 yd – 1 ft

(c) 5 ft 7 in. + _____ in. = 6 ft 5 in.

(d) _____ in. = 1 ft – 9 in.

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Name: _____ Class: _____ Date: _____

Exercise 4 : Miles

1. Fill in the blanks

(a) 1 mile = _____ ft

(b) $\frac{1}{2}$ mile = _____ ft

(c) $\frac{1}{4}$ mile = _____ ft

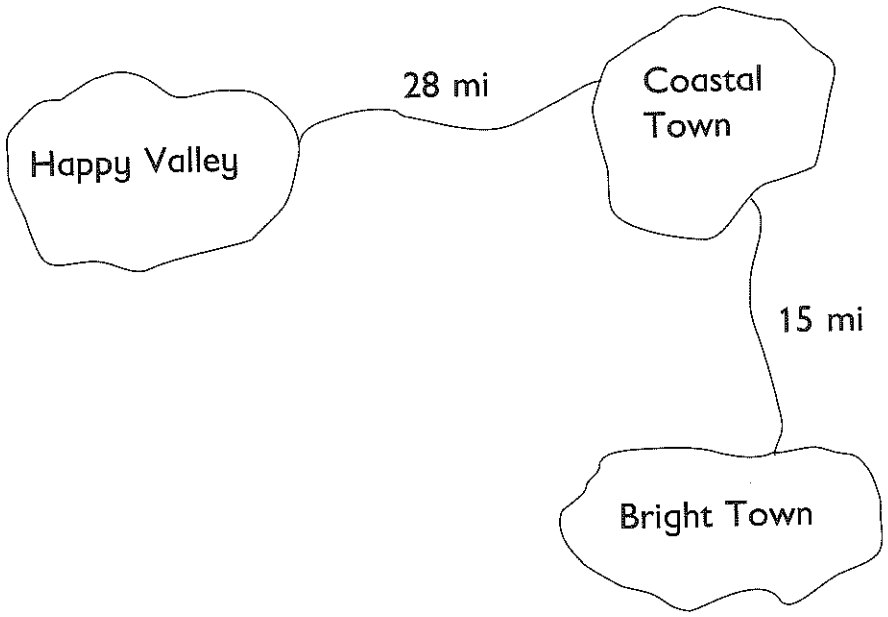
(d) 1 mile = _____ yd

(e) $\frac{1}{2}$ mile = _____ yd

(f) $\frac{1}{4}$ mile = _____ yd

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2. Fill in the blanks.



(a) The distance between Happy Valley and Coastal Town is _____ mi.

(b) The distance between Happy Valley and Bright Town is _____ mi.

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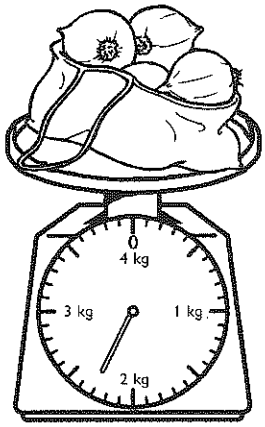
Unit 7 : Weight

Friendly Notes

Kilograms and Grams

The kilogram (kg) and gram (g) are units of weight.

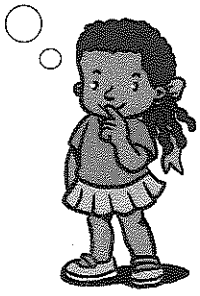
1 kg = 1000 g



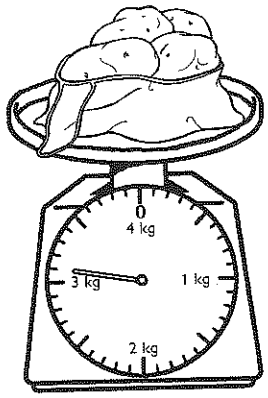
The bag of onions weighs 2 kg 300 g.

It weighs 2300 g.

$2 \text{ kg} = 2 \times 1000 \text{ g}$
$= 2000 \text{ g}$
$2 \text{ kg } 300 \text{ g} = 2000 \text{ g} + 300 \text{ g}$



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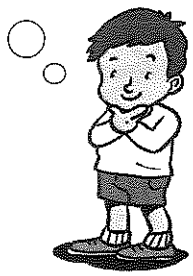
The bag of potatoes weighs 3 kg 100 g.

It weighs 3100 g.

$3100 - 2300 = 800$

$3\text{ kg} = 3 \times 1000\text{ g}$
$= 3000\text{ g}$
$3\text{ kg } 100\text{ g} = 3000\text{ g} + 100\text{ g}$

The bag of potatoes is 800 g heavier than the bag of onions.

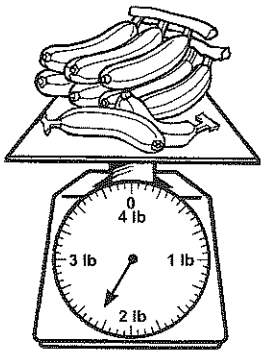


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Pounds and Ounces

The pound (lb) and ounce (oz) are other units of weight.

1 lb = 16 oz

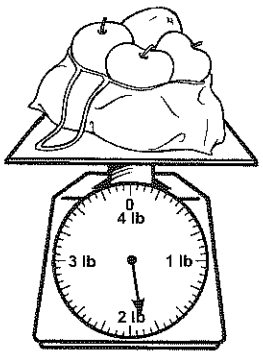


The weight of the bananas is 2 lb 5 oz.

1 lb = 16 oz
2 lb = 16 × 2
= 32 oz
2 lb 5 oz = 32 oz + 5 oz

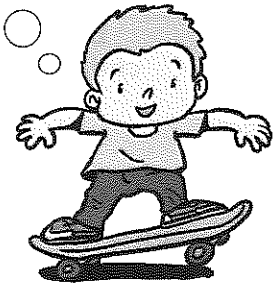


They weigh 37 oz.



The weight of the bag of apples is 1 lb 14 oz.

1 lb = 16 oz
1 lb 14 oz = 16 oz + 14 oz



It weighs 30 oz.

37 – 30 = 7

The bananas weigh 7 oz more than the bag of apples.

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Word Problems

Models can help us solve word problems on weight.

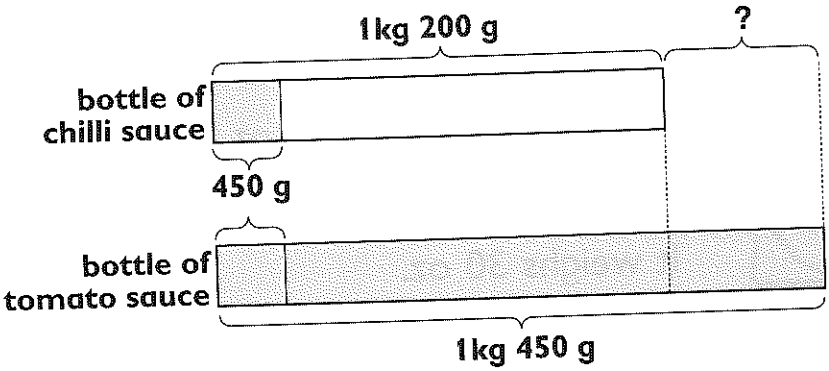
1. A bottle of chilli sauce weighs 1 kg 200 g.
   A bottle of tomato sauce weighs 1 kg 450 g.
   Each empty bottle weighs 450 g.
   (a) How many grams of chilli sauce are there in the bottle?
   (b) How much heavier is the bottle of tomato sauce than the chilli sauce?

(a) 1 kg 200 g = 1000 g + 200 g
= 1200 g

1200 g – 450 g = 750 g

There are 750 g of chilli sauce in the bottle.

(b)



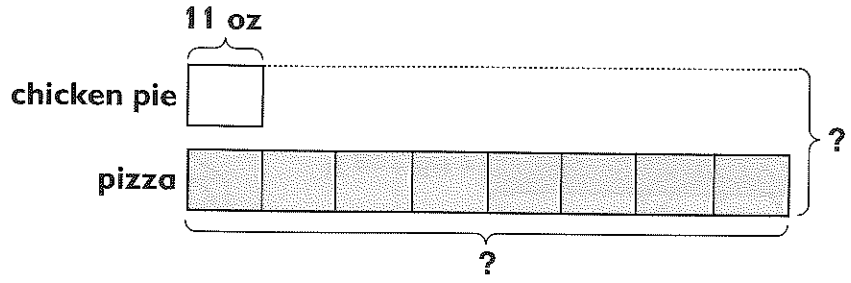
1 kg 450 g – 1 kg 200 g = 250 g

The bottle of tomato sauce is 250 g heavier than the bottle of chilli sauce.

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2. A chicken pie weighs 11 oz.
A pizza is 8 times as heavy as the chicken pie.
(a) What is the weight of the pizza in pounds and ounces?
(b) What is the total weight of the chicken pie and pizza in ounces?

(a)



11×8 oz $= 88$ oz
$= 5$ lb 8 oz

1 lb = 16 oz
88 – 16 = 72
72 – 16 = 56
56 – 16 = 40
40 – 16 = 24
24 – 16 = 8
I can subtract 16 five times from 88 and have 8 left over.
So, 88 oz = 5 lb 8 oz

The weight of the pizza is 5 lb 8 oz.

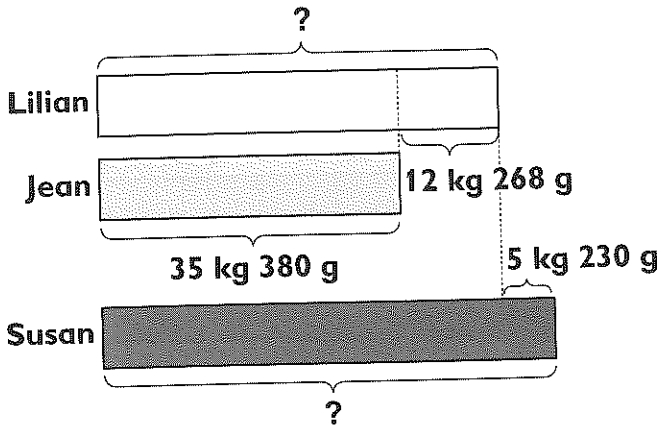


(b) 11 oz + 88 oz = 99 oz

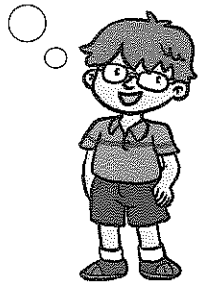
The total weight of the chicken pie and the pizza is 99 oz.

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3. Lilian is 12 kg 268 g heavier than Jean.
Jean weighs 35 kg 380 g.
Lilian is 5 kg 230 g lighter than Susan.
Find Susan's weight in kilograms and grams.



35 kg 380 g $\xrightarrow{+ 12 \text{ kg}}$ 47 kg 380 g $\xrightarrow{+ 268 \text{ g}}$ 47 kg 648 g



35 kg 380 g + 12 kg 268 g = 47 kg 648 g

Lilian weighs 47 kg 648 g.

47 kg 648 g + 5 kg 230 g = 52 kg 878 g.

Susan's weight is 52 kg 878 g.

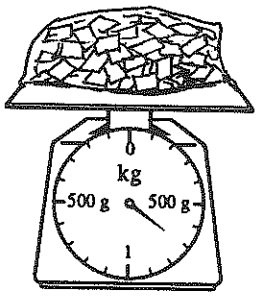
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Name: _____ Class: _____ Date: _____

Exercise 1 : Kilograms and Grams

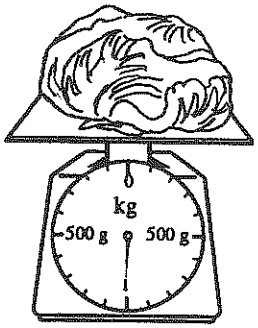
1. Write the weight of each of the following.

(a)



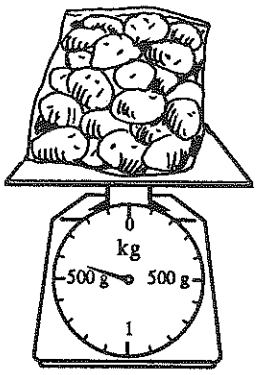
_____ kg _____ g

(b)



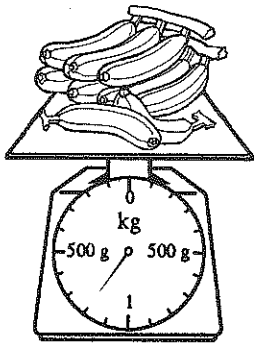
_____ kg _____ g

(c)



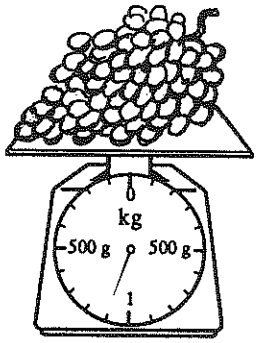
_____ kg _____ g

(d)



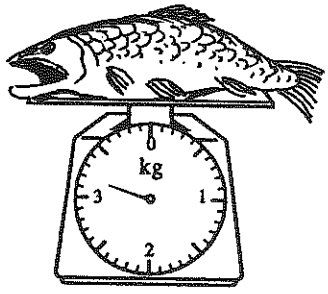
_____ kg _____ g

(e)



_____ kg _____ g

(f)



_____ kg _____ g

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2. Write in kilograms and grams.

(a) 1025 g = _____ kg _____ g

(b) 2100 g = _____ kg _____ g

(c) 5007 g = _____ kg _____ g

(d) 8050 g = _____ kg _____ g

3. Write in grams.

(a) 1 kg 300 g = _____ g

(b) 3 kg 80 g = _____ g

(c) 4 kg 9 g = _____ g

(d) 5 kg 125 g = _____ g

(e) 6 kg 10 g = _____ g

(f) 7 kg 1 g = _____ g

4. Write the missing numbers.

(a) 630 g + _____ g = 1 kg

(b) _____ g + 950 g = 1 kg

(c) 805 g + 195 g = _____ kg

(d) 1 kg – _____ g = 270 g

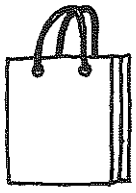
(e) 1 kg – 540 g = _____ g

(f) _____ kg – 360 g = 640 g

(g) 1 kg = 5 g + _____ g

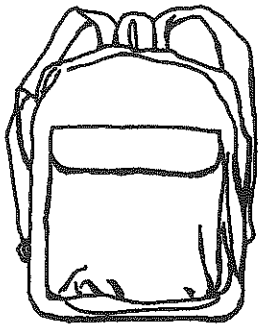
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5. Fill in the blanks.



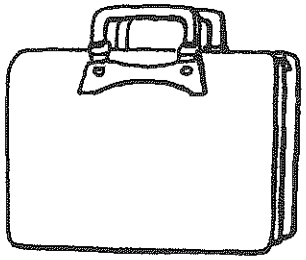
A

850 g



B

2 kg



C

1 kg 990 g

(a) Bag _____ is the lightest.

(b) Bag _____ is the heaviest.

(c) Bag _____ is heavier than Bag C.

(d) The total weight of Bag A and Bag B is

_____ kg _____ g.

(e) Bag B is _____ g heavier than Bag C.

(f) The difference in weight between Bag _____

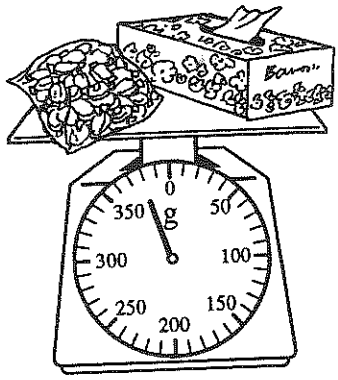
and Bag _____ is 1 kg 150 g.

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6. Do these.

(a) (i) Total weight of the box of tissue and the bag of mixed nuts

= _____



(ii) The weight of the bag of mixed nuts is 250 g.

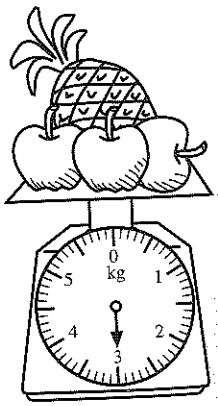
Weight of the box of tissue

= _____

(iii) The bag of mixed nuts is _____ g heavier than the box of tissue.

(b) (i) Total weight of the pineapple and 3 apples

= _____



(ii) The pineapple weighs 2 kg.

Weight of the 3 apples

= _____

(iii) The cost of the 3 apples is $1.00. Mr. Ricci paid $5 altogether.

Cost of the pineapple

= _____

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Name: _____ Class: _____ Date: _____

Exercise 2 : Word Problems

1. Do these. Show your work clearly.
You may draw models to help you.

(a) The weight of an empty vase is 2 kg 300 g.
Mary puts 10 stalks of flowers into the vase.
The weight of each stalk of flower is 40 g.
What is the total weight of the vase and the flowers?

(b) Caroline weighs 22 kg 550 g.
Her sister is twice as heavy as Caroline.
What is her sister's weight?

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(c) A lemon is 8 times as light as a cantaloupe.
The cantaloupe weighs 4 kg 320 g.
What is the weight of the lemon?

(d) A chicken weighs 2 kg 800 g.
A turkey weighs 6 kg 230 g.
How much heavier is the turkey?
What is the total weight of the chicken and the turkey?

(e) There are 9 oranges in a box.
Each orange weighs 325 g.
The box of oranges weighs 3 kg 485 g.
Find the weight of the empty box.

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Name: _____ Class: _____ Date: _____

Exercise 3 : Pounds and Ounces

1. Write in pounds and ounces.

   (a) 18 oz = _____ lb _____ oz

   (b) 25 oz = _____ lb _____ oz

   (c) 16 oz = _____ lb _____ oz

2. Write in ounces.

   (a) 4 lb = _____ oz

   (b) 2 lb 5 oz = _____ oz

   (c) 6 lb 10 oz = _____ oz

   (d) 3 lb 12 oz = _____ oz

   (e) 5 lb 14 oz = _____ oz

   (f) 9 lb 6 oz = _____ oz

3. Write the missing numbers.

   (a) 2 oz + _____ oz = 1 lb

   (b) _____ oz + 20 oz = 2 lb

   (c) 24 oz + 24 oz = _____ lb

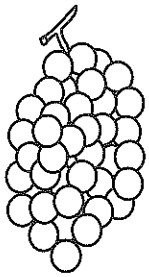
   (d) 4 lb – _____ oz = 52 oz

   (e) 5 lb – 5 oz = _____ oz

   (f) _____ lb – 3 oz = 29 oz

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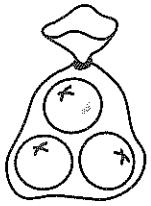
4. Fill in the blanks.



A
1 lb 3 oz



B
7 oz



C
20 oz

(a) Item _____ is the heaviest.

(b) Item A weighs _____ oz.

(c) Item _____ is lighter than Item A.

(d) Item B is _____ oz lighter than Item A.

(e) The difference in weight between Item _____ and Item _____ is 1 oz.

(f) The total weight of all three items is _____ lb _____ oz.

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Unit 8 : Capacity

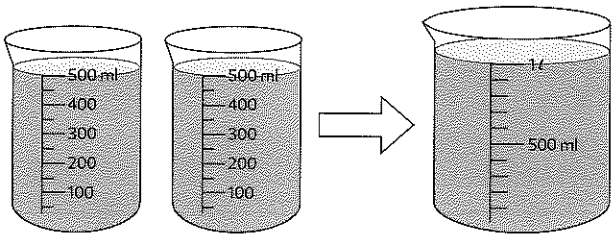
Friendly Notes

Liters and Milliliters

The liter (ℓ) and milliliter (ml) are units of capacity.

The capacity of a container is the amount it can hold.

1 ℓ = 1000 ml



1. Write 4069 ml in ℓ and ml.

   4069 ml = 4 ℓ 69 ml

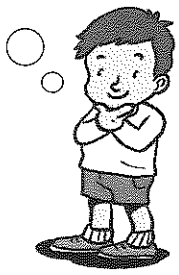
4069 ml = 4000 ml + 69 ml
4 ℓ = 4000 ml



2. Write 8 ℓ 134 ml in ml.

   8 ℓ 134 ml = 8134 ml

8 ℓ = 8 × 1000
= 8000 ml
8 ℓ 134 ml = 8000 ml + 134 ml



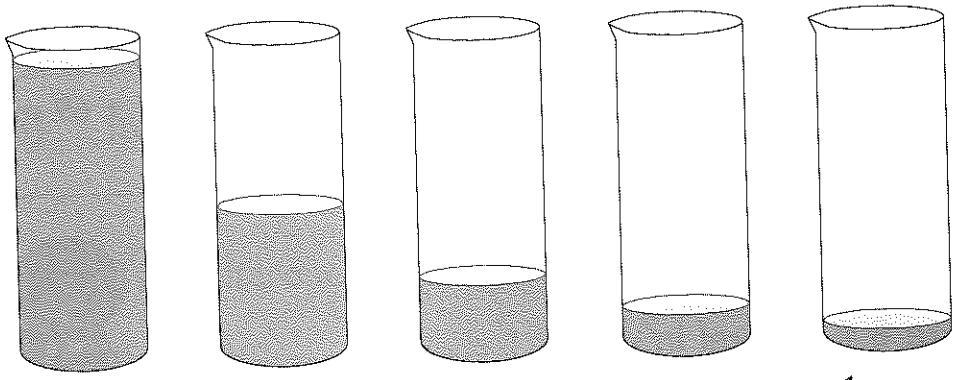
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Gallons, Quarts, Pints and Cups

The gallon (gal), quart (qt), pint (pt) and cup (c) are other units of capacity.

We usually measure a bigger amount of water in gallons and quarts.

1 pint	= 2 cups
1 quart	= 2 pints
	= 4 cups
1 half-gallon	= 2 quarts
	= 4 pints
	= 8 cups
1 gallon	= 2 half-gallons
	= 4 quarts
	= 8 pints
	= 16 cups

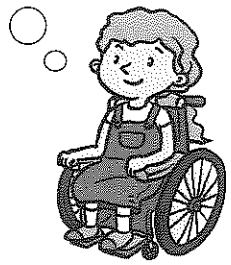


1 gallon (gal) | 1 half-gallon | 1 quart (qt) | 1 pint (pt) | 1 cup (c)

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1. Write 2 gal 3 qt in qt.

1 gal = 4 qt
2 gal = 8 qt
2 gal 3 qt = 8 qt + 3 qt



2 gal 3 qt = 11 qt

2. Write 18 qt in gal and qt.

1 gal = 4 qt
18 ÷ 4 = 4 R 2



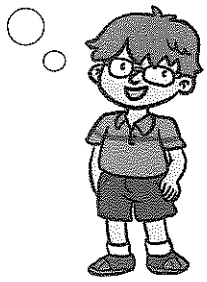
18 qt = 4 gal 2 qt

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3. Write 10 pt 4 c in c.

1 pt = 2 c
10 pt = 10 × 2 c
= 20 c
10 pt 4 c = 20 c + 4 c

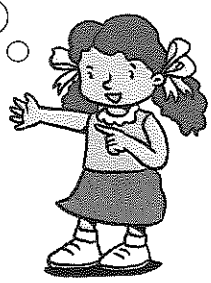
10 pt 4 c = 24 c



4. Write 35 c in pt and c.

1 pt = 2 c
35 ÷ 2 = 17 R 1

35 c = 17 pt 1 c



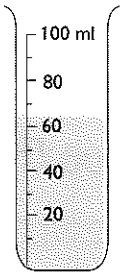
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Name: _____ Class: _____ Date: _____

Exercise 1 : Liters and Milliliters

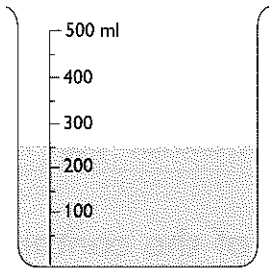
1. How much water is there in each container?

(a)



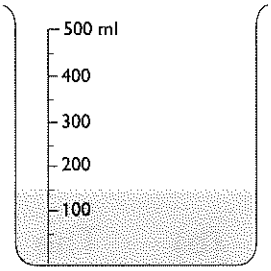
_____ ml

(b)



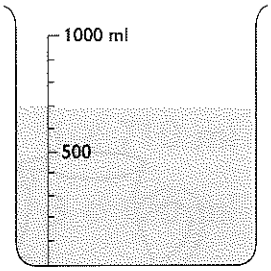
_____ ml

(c)



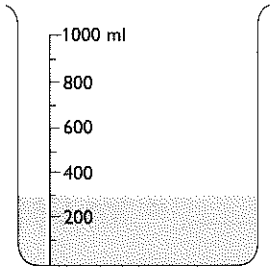
_____ ml

(d)



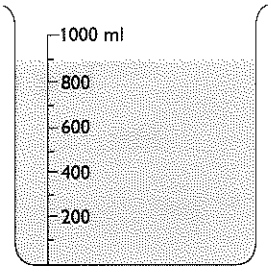
_____ ml

(e)



_____ ml

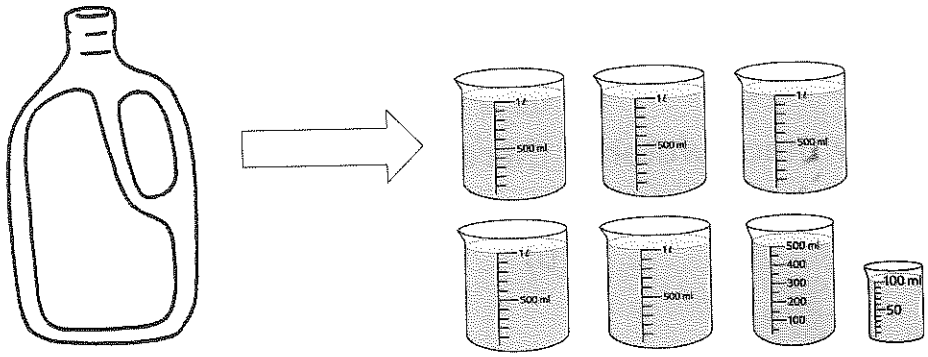
(f)



_____ ml

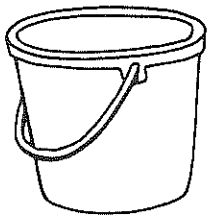
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2. Fill in the blanks.



(a) The above container can hold ___ ℓ ___ ml of water.

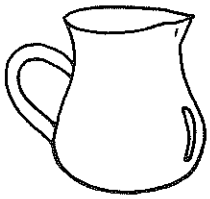
(b) The capacity of the container is ___ ℓ ___ ml.



(c) The bucket above can hold twice as much water as the container.

The capacity of the bucket is ___ ℓ ___ ml.

(d) The capacity of this jug is 2 liters.



The bucket holds ___ ℓ ___ ml more water than the jug.

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3. Write in milliliters.

(a) 1 ℓ 5 ml = _____ ml

(b) 1 ℓ 200 ml = _____ ml

(c) 2 ℓ 15 ml = _____ ml

(d) 3 ℓ 525 ml = _____ ml

4. Write in liters and milliliters.

(a) 1600 ml = _____ ℓ _____ ml

(b) 2895 ml = _____ ℓ _____ ml

(c) 3005 ml = _____ ℓ _____ ml

(d) 3070 ml = _____ ℓ _____ ml

5. Add or subtract.

(a) 1 ℓ 200 ml + 450 ml = _____ ℓ _____ ml

(b) 3 ℓ 650 ml + 250 ml = _____ ℓ _____ ml

(c) 1 ℓ 710 ml + 6 ℓ 5 ml = _____ ℓ _____ ml

(d) 3 ℓ 170 ml + 2 ℓ 260 ml = _____ ℓ _____ ml

(e) 4 ℓ 65 ml + 3 ℓ 307 ml = _____ ℓ _____ ml

(f) 3 ℓ 620 ml – 720 ml = _____ ℓ _____ ml

(g) 4 ℓ 450 ml – 1 ℓ 680 ml = _____ ℓ _____ ml

(h) 5 ℓ 970 ml – 2 ℓ 860 ml = _____ ℓ _____ ml

(i) 6 ℓ 5 ml – 3 ℓ 152 ml = _____ ℓ _____ ml

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6. Do these. Show your work clearly.
You may draw models to help you.

(a) Mr. Ray poured 9 ℓ 500 ml of oil equally into 5 bottles.
How much oil was there in each bottle?

(b) A fish tank has a capacity of 7 ℓ 470 ml.
It contains 4 ℓ 385 ml of water.
How many more milliliters of water are needed to fill up the tank?

(c) Rachel has 6 ℓ 950 ml of fruit juice.
She needs 8 ℓ 400 ml of fruit juice for her party.
How much more fruit juice does she need?

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Name: _____ Class: _____ Date: _____

Exercise 2 : Gallons, Quarts, Pints and Cups

1. Write in c.

   (a) 19 pt = _____ c

   (b) 23 pt 1 c = _____ c

2. Write in pt.

   (a) 8 qt = _____ pt

   (b) 10 qt 1 pt = _____ pt

3. Write in qt.

   (a) 12 gal = _____ qt

   (b) 33 gal 3 qt = _____ qt

4. Write in gal.

   (a) 24 qt = _____ gal

   (b) 48 qt = _____ gal

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5. Add or subtract.

(a) 2 qt 1 pt + 11 qt 1 pt = _____ qt _____ pt

(b) 2 gal 2 qt + 2 gal 2 qt = _____ gal _____ qt

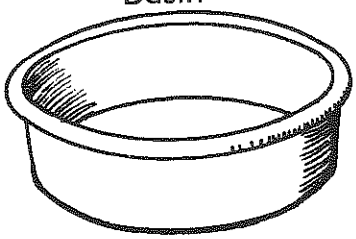
(c) 2 pt 1 c + 11 c = _____ pt _____ c

(d) 617 pt – 165 pt 1 c = _____ pt _____ c

(e) 13 gal 1 qt – 7 gal 2 qt = _____ gal _____ qt

(f) 7 qt – 7 pt = _____ qt _____ pt

6. Fill in the blanks.



3 qt



1 qt 2 c



1 c

(a) The basin holds _____ qt _____ c more water than the bottle.

(b) The bottle holds _____ qt _____ c less water than the jug.

(c) The total capacity of the three containers is _____ qt _____ c.

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7. Do these. Show all your work clearly.

(a) A container contains 2 gal 3 qt of water.
1 gal 3 qt more water is needed to fill up the container.
What is the capacity of the container?

(b) Kathy had 8 gal 3 qt of orange juice.
She gave 4 c of juice to Tyrone and put the remaining juice equally into 4 containers.
How much juice was there in each container?
Give the answer in gallons and cups.

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(c) Mrs. Beck bought 4 cartons of milk.
Each carton contained half a gallon of milk.
If she used 2 pints of milk, how much milk did she have left?
Give the answer in gallons and pints.

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Unit 9 : Money

Friendly Notes

Dollars and Cents

The dollar ($) and cent (¢) are units of money.
100 cents is needed to make one dollar.

$1 = 100¢

We write 6 dollars 20 cents as $6.20.
The dot (.) separates the cents from the dollars.



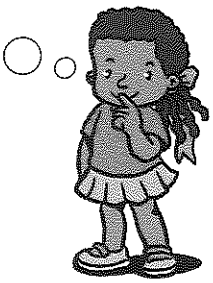






1. Write $12.08 in cents.
   $12.08 = $1208¢

$12.08 = $12 + 8¢
$12 = 12 × 100¢
= 1200¢



2. Write 367¢ in dollars and cents.
   367¢ = $3.67



367¢ = 300¢ + 67¢
$1 = 100¢
$3 = 300¢

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Addition

We add different amounts of money in the same way we add whole numbers.
Then we put in the dot at the right place, to separate the dollars and the cents.

Find the value of \$4.05 and \$26.85.



\$26.85 $\xrightarrow{+\ \$4}$ \$30.85 $\xrightarrow{+\ 5¢}$ \$30.90

\$4.05 + \$26.85 = \$30.90

We can also add like this:

$$\begin{array}{r} \$\ 26.85 \\ +\ \$\ \ 4.05 \\ \hline \$\ 30.90 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1}\ \ {\scriptstyle 1} \\ 2685 \\ +\ \ 405 \\ \hline 3090 \end{array}$$

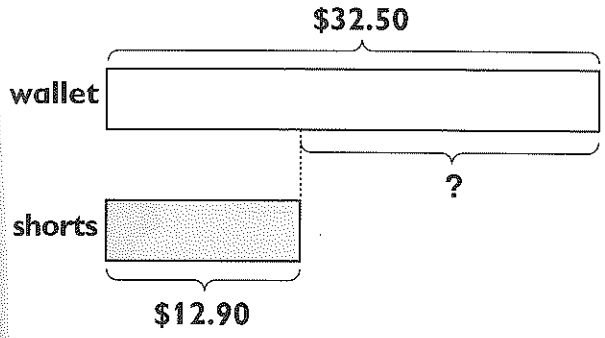


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Subtraction

We subtract different amounts of money in the same way we subtract whole numbers.
Then we put in the dot to separate the dollars and the cents.

A wallet costs $32.50.
A pair of shorts costs $12.90.
How much more does the wallet cost than the pair of shorts?



$$\begin{array}{r} {}^{2}\cancel{3}\,{}^{11}\cancel{2}\,{}^{15}\cancel{5}0 \\ -\ 1\,2\,9\,0 \\ \hline 1\,9\,6\,0 \end{array}$$



$\$32.50 \xrightarrow{-\ \$12} \$20.50 \xrightarrow{-\ 90¢} \$19.60$

The wallet costs $19.60 more than the pair of shorts.

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Multiplication and Division

We multiply or divide money in the same way we multiply or divide whole numbers.
Then we put in the dot to separate the dollars and the cents.

1. Lily saves $25.50 a week.
   How much does she save in 3 weeks?

   $25.50 × 3 = $76.50

$$\begin{array}{r} {\scriptstyle 1\ 1\ \ } \\ 2550 \\ \times \quad 3 \\ \hline 7650 \end{array}$$



   Lily saves $76.50 in 3 weeks.

2. 3 pounds of minced meat cost $9.60.
   What is the cost of 1 pound of minced meat?

   $9.60 = 960¢

   960 ÷ 3 = 320

   320¢ = $3.20

$$\begin{array}{r} 320 \\ 3\overline{)960} \\ 9 \\ \hline 06 \\ 6 \\ \hline 00 \end{array}$$



   The cost of 1 pound of minced meat is $3.20.

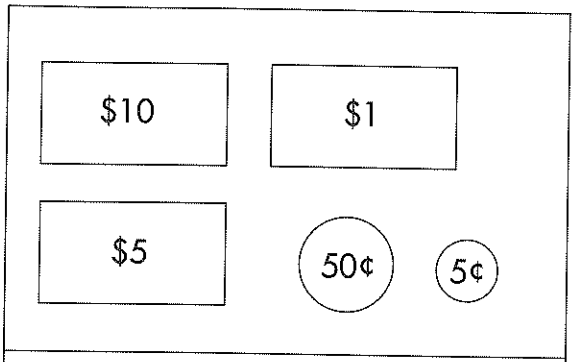
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Name: _____ Class: _____ Date: _____

Exercise 1 : Dollars and Cents

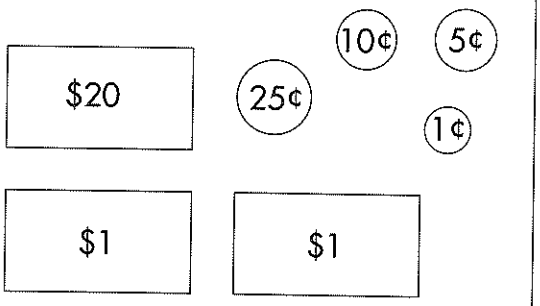
1. Write the amount of money in each set.

(a)



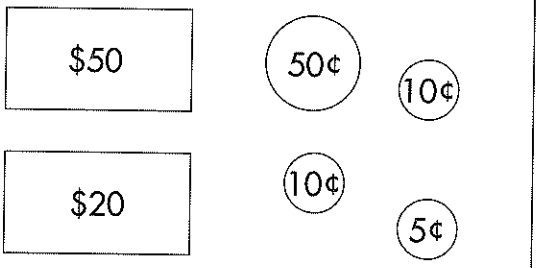
$ _____

(b)



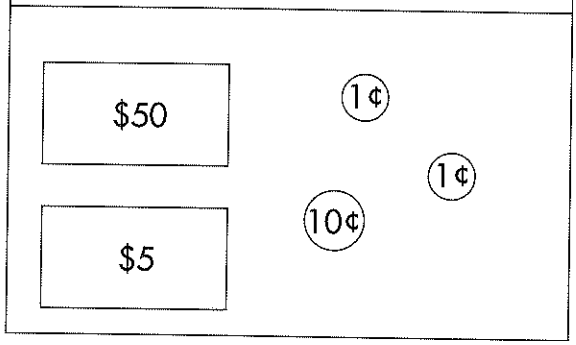
$ _____

(c)



$ _____

(d)



$ _____

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2. Write each amount of money in figures.

(a)	two dollars ninety-five cents	
(b)	ten dollars twenty cents	
(c)	fourteen dollars fifteen cents	
(d)	twenty-three dollars sixty cents	
(e)	thirty dollars seventy-five cents	
(f)	ninety-four dollars fifteen cents	
(g)	five hundred twelve dollars five cents	
(h)	four thousand, forty dollars	

3. Write each amount of money in words.

(a)	$5.50	
(b)	$10.10	
(c)	$57.75	
(d)	$83.40	
(e)	$261	
(f)	$4567	

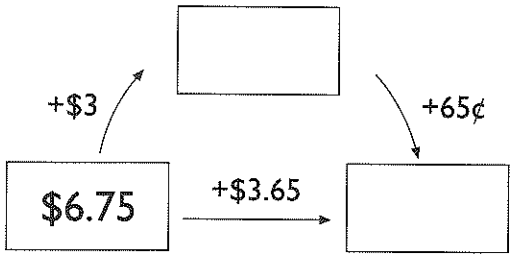
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Name: _____ Class: _____ Date: _____

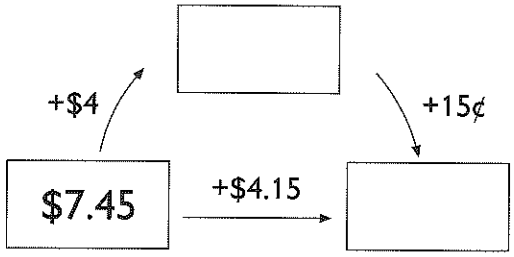
Exercise 2 : Addition

1. Write the missing numbers.

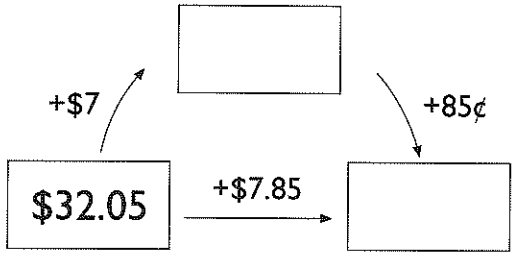
(a)



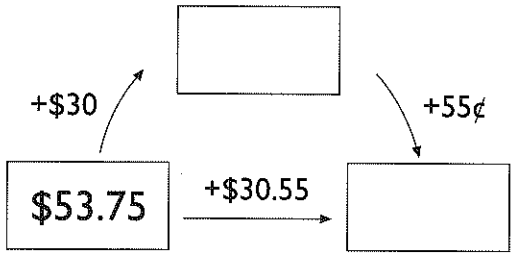
(b)



(c)



(d)



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2. Add.

(a) $1.90 + $4.10 =

(b) $3.40 + $5.60 =

(c) $4.85 + $5.15 =

(d) $6.75 + $7.25 =

(e) $8.05 + $9.95 =

(f) $12.55 + $2.45 =

(g) $12.40 + $0.99 =

(h) $1.99 + $15.50 =

(i) $3.95 + $41.15 =

(j) $36.70 + $2.95 =

3. Add.

(a) $3.80 + $4.25	(b) $5.20 + $6.90	(c) $16.25 + $13.75
(d) $48.15 + $23.25	(e) $30.05 + $12.65	(f) $24.80 + $18.95

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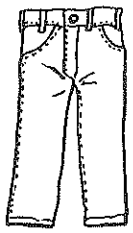
4. Complete the bills.



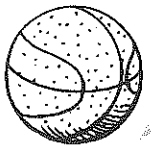
Shoes
$12.99



Socks
$2.35



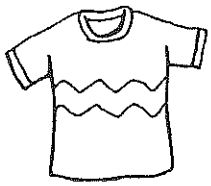
Jeans
$27.85



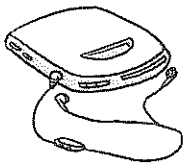
Basketball
$15.60



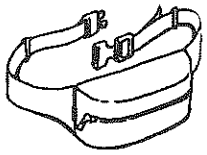
Racket
$11.20



T-shirt
$5.45



CD-player
$50.50



Pouch
$4.25

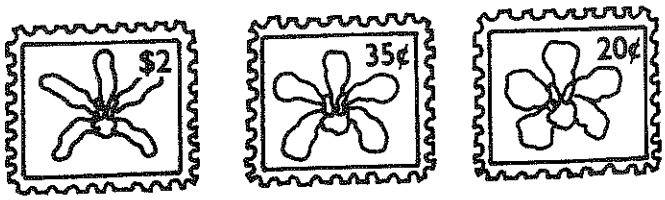
(a) 1 CD-player $ 1 pouch $ _____ Total $	(b) 1 pair of shoes $ 1 pair of socks $ _____ Total $
(c) 1 T-shirt $ 1 pair of jeans $ _____ Total $	(d) 1 racket $ 1 basketball $ _____ Total $
(e) 1 pouch $ 1 CD-player $ 1 racket $ _____ Total $	(f) 1 pair of jeans $ 1 pair of shoes $ 1 basketball $ _____ Total $

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5. Do these. Show all your work clearly.

(a) Adam saved $8. He saved $0.80 less than Lisa. How much did Lisa save?

(b) After buying this set of stamps, Jane had $5.65 left. How much money did she have at first?



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(c) Sam has $24.25 in his coin bank.
He puts in another $30.25.
How much money does he have in his coin bank now?

(d) Tony bought a dictionary and a storybook.
The storybook cost $4.50.
The dictionary cost $5.25 more than the storybook.
How much did the dictionary cost?

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(e) Andy has $16.15. Emily has $19.36.
How much do they have altogether?

(f) Mr. Lee gave $5.00 to David.
John was given $2.30 more than David.
How much did Mr. Lee give David and John altogether?

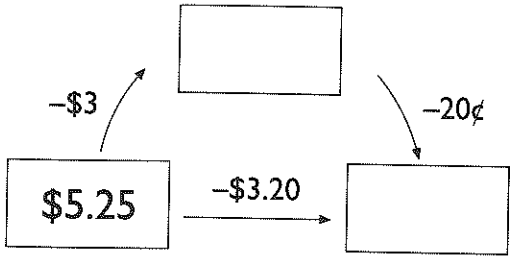
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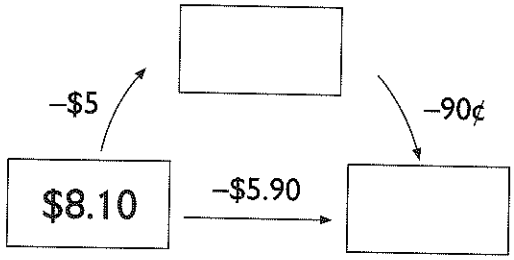
Exercise 3 : Subtraction

1. Write the missing numbers.

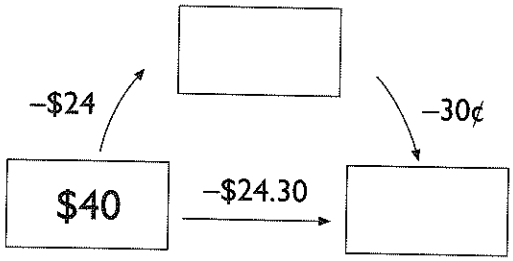
(a)



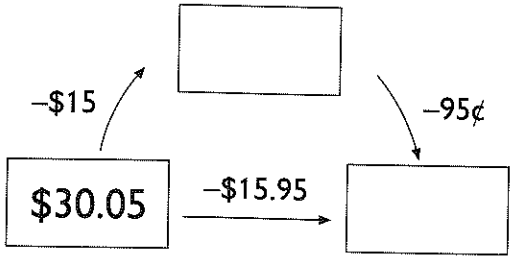
(b)



(c)



(d)



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2. Subtract.

(a) $4 – $1.50 =	(b) $7 – $5.30 =
(c) $20 – $3.40 =	(d) $30 – $7.75 =
(e) $70 – $5.25 =	(f) $50 – $23.80 =
(g) $90 – $74.10 =	(h) $80 – $50.55 =
(i) $18.15 – $0.95 =	(j) $20.05 – $1.99 =

3. Subtract.

(a) $3.25 − $0.85	(b) $4.50 − $3.45	(c) $8.20 − $6.90
(d) $20.00 − $16.35	(e) $50.05 − $27.90	(f) $32.35 − $29.80

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4. Do these. Show all your work clearly.

(a) Mr. Ward bought a watermelon.
He gave the shopkeeper $10.
How much change did he get?



(b) Jamie has $9.65.
She wants to buy a dress that costs $18.50.
How much more money does she need?

(c) Sean's father gave him $16.20.
Sean spent $8.55 on some books.
How much money did he have left?

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(d) Bill has $2.75.
His father gives him $13.50 more.
Bill then uses the money to buy a dictionary which costs $14.30.
How much money does Bill have after buying the dictionary?

(e) Sally has two coin banks.
The first coin bank contains $20.07 and the second one contains $30.15.
Sally takes $3.19 from the first coin bank.
How much more money does the second coin bank now contain compared to the first one?

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Exercise 4 : Multiplication and Division

1. Find the value of each of the following.

(a) $150¢ \times 5$	(b) $280¢ \times 4$
(c) $\$12.00 \times 3$	(d) $\$33.60 \times 6$

2. Find the value of each of the following.

(a) $320¢ \div 8$	(b) $5400¢ \div 9$
(c) $\$8.40 \div 7$	(d) $\$45.18 \div 9$

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3. Do these. Show all your work clearly.

(a) Lucy spent $10.80 on a present.
David spent 6 times as much as Lucy on another.
How much money did David spend?

(b) The total cost of 9 bags is $77.40.
Each bag costs the same amount of money.
What is the cost of one bag?

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Unit 10 : Fractions

Friendly Notes

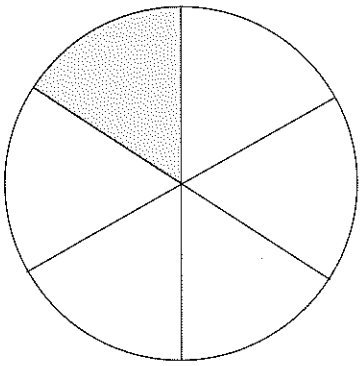
Fraction of a Whole

1 whole = 2 halves = $\frac{2}{2}$

1 whole = 3 thirds = $\frac{3}{3}$

1 whole = 4 fourths = $\frac{4}{4}$

1 whole = 5 fifths = $\frac{5}{5}$



1 out of 6 equal parts is colored.

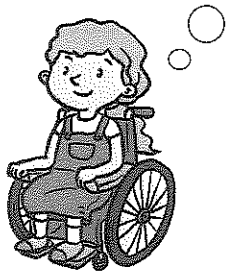
$\frac{1}{6}$ of the circle is colored.

$\frac{1}{6}$ = one-sixth

1 whole = 6 sixths

$\frac{1}{6}$ and $\frac{5}{6}$ make one whole.

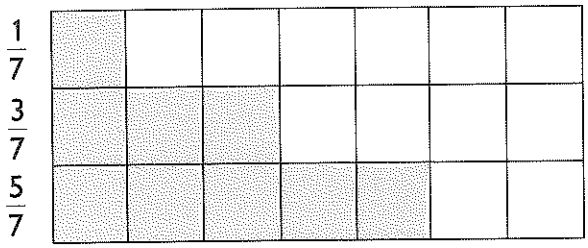
$\frac{1}{6}$ ← numerator
$\frac{1}{6}$ ← denominator

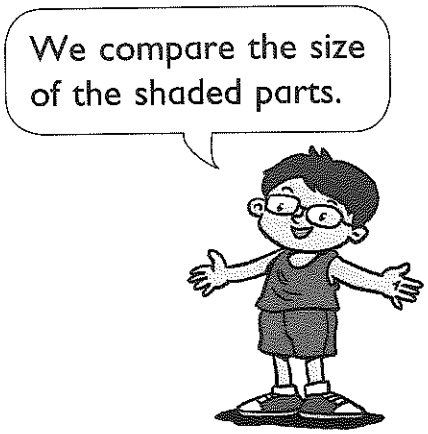


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For fractions with a common denominator, the fraction with the greatest numerator is the greatest.

Arrange the fractions in order.
Begin with the smallest.





$\frac{5}{7}$ is the greatest.

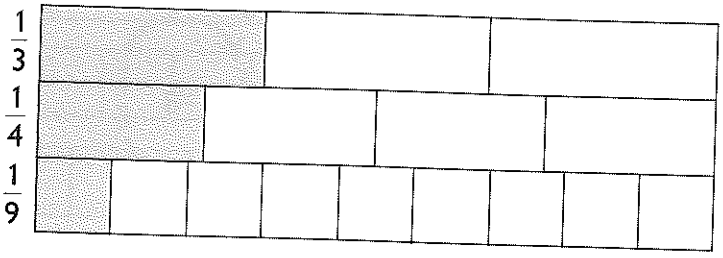
$\frac{1}{7}$ is the smallest.

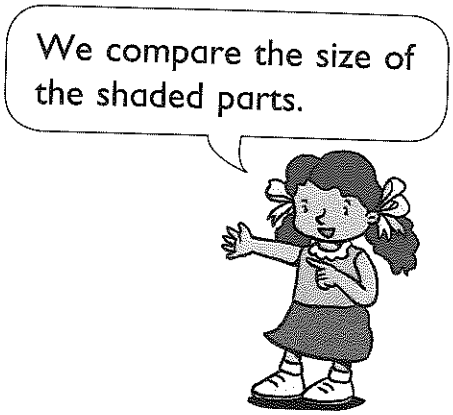
Arranging the fractions in order beginning with the smallest, we have $\frac{1}{7}$, $\frac{3}{7}$, $\frac{5}{7}$.

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For fractions with a common numerator, the fraction with the greatest denominator is the smallest.

Arrange the fractions in order.
Begin with the smallest.





$\frac{1}{3}$ is the greatest.

$\frac{1}{9}$ is the smallest.

Arranging the fractions in order beginning with the smallest, we have $\frac{1}{9}$, $\frac{1}{4}$, $\frac{1}{3}$.

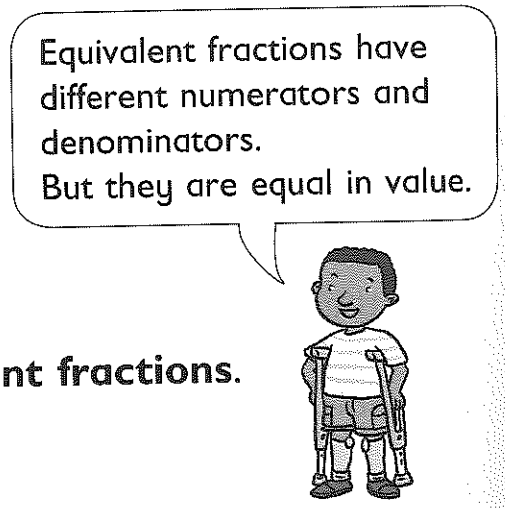
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Equivalent Fractions

$\frac{1}{2}$						$\frac{1}{2}$					
$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$		
$\frac{1}{6}$			$\frac{1}{6}$			$\frac{1}{6}$			$\frac{1}{6}$		
$\frac{1}{8}$			$\frac{1}{8}$			$\frac{1}{8}$			$\frac{1}{8}$		
$\frac{1}{10}$			$\frac{1}{10}$			$\frac{1}{10}$			$\frac{1}{10}$		
$\frac{1}{12}$			$\frac{1}{12}$			$\frac{1}{12}$			$\frac{1}{12}$		

From the above bars, we can see that the following fractions are equal.

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12}$$



$\frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \frac{4}{8}, \frac{5}{10}, \frac{6}{12}$ are **equivalent fractions.**

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To find an equivalent fraction, we can either multiply or divide the numerator and denominator by the same number.

Find an equivalent fraction of $\frac{1}{3}$ and $\frac{6}{10}$.

$\frac{1}{3} \overset{\times 3}{=} \frac{3}{9}$ $\quad$ $\frac{6}{10} \overset{\div 2}{=} \frac{3}{5}$

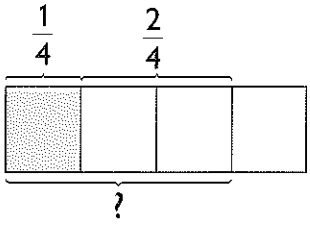
Adding Fractions

We can only add fractions with a common denominator.
We only add the numerators.

Mrs. Lewis drank $\frac{1}{4}$ liter of apple juice on Monday.

She drank $\frac{2}{4}$ liters of apple juice on Tuesday.

How much apple juice did she drink altogether?



1 fourth + 2 fourths = 3 fourths



$\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$

She drank $\frac{3}{4}$ ℓ of apple juice altogether.

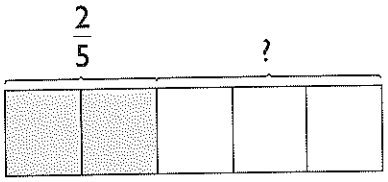
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Subtracting Fractions

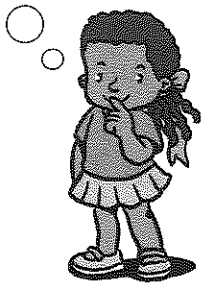
We can only subtract fractions with a common denominator.
We only subtract the numerators.

George gave $\frac{2}{5}$ of his marbles to John.

What fraction of his marbles did he have left?



1 whole = 5 fifths
5 fifths – 2 fifths = 3 fifths

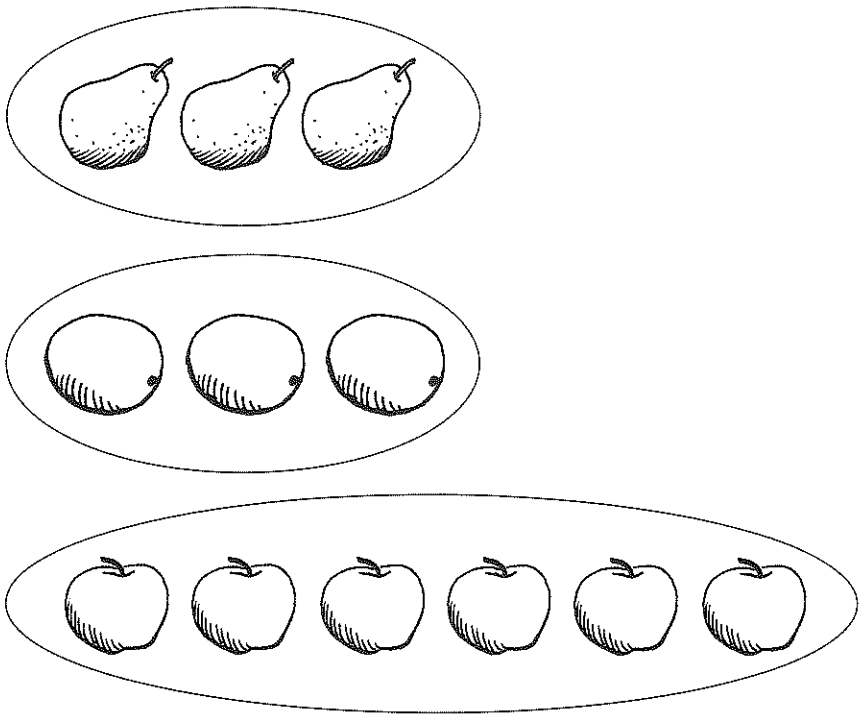


$\frac{5}{5} - \frac{2}{5} = \frac{3}{5}$

He had $\frac{3}{5}$ of his marbles left.

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Fraction of a Set

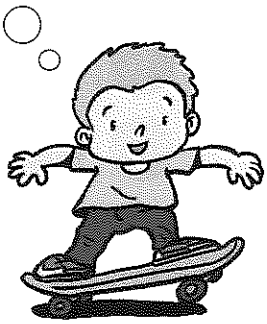


3 out of 12 fruits are pears.

$\frac{3}{12}$ of the fruits are pears.

$\frac{3}{12} = \frac{1}{4}$

$\frac{6}{12} = \frac{1}{2}$



3 out of 12 fruits are mangoes.

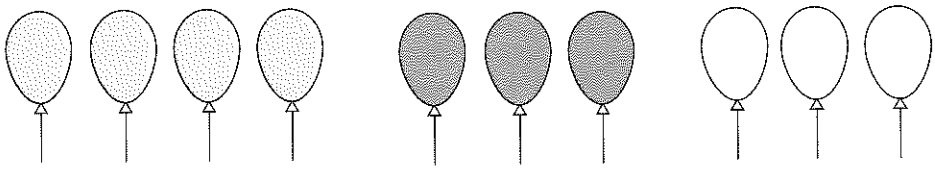
$\frac{3}{12}$ of the fruits are mangoes.

6 out of 12 fruits are apples.

$\frac{6}{12}$ of the fruits are apples.

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1. There are 10 balloons.
   3 of these balloons are red.
   4 of these balloons are green.
   The remaining balloons are white.
   What fraction of the balloons are white?

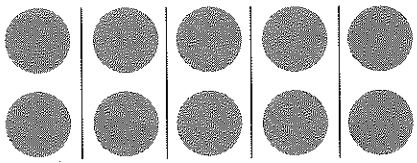


green balloons red balloons white balloons

$10 - 3 - 4 = 3$

$\frac{3}{10}$ of the balloons are white.

2. What is $\frac{1}{5}$ of 10?



$\frac{1}{5}$ of $10 = 2$

$\frac{1}{5}$ → 1 part out of
$\frac{1}{5}$ → 5 equal parts

Divide 10 into 5 equal groups.
One group is $\frac{1}{5}$ of 10.



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Fractions and Money

10 dimes make a dollar.
100 pennies make a dollar.
4 quarters also make a dollar.

1 dime = $\frac{1}{10}$ of a dollar

1 penny = $\frac{1}{100}$ of a dollar

1 quarter = $\frac{1}{4}$ of a dollar


dime


penny


quarter


half-dollar


nickel



a dollar note

1. What fraction of a dollar is 6 dimes?

$\frac{6}{10} = \frac{3}{5}$

A dollar = 10 dimes

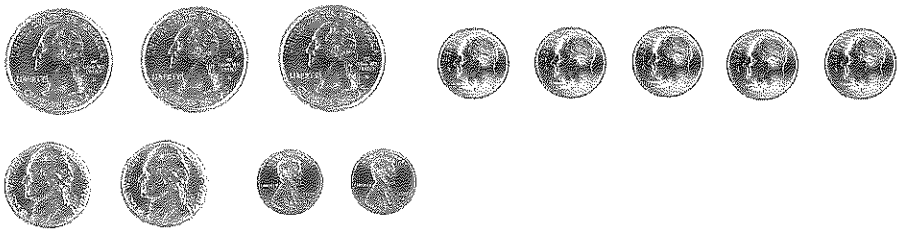
6 dimes out of 10 dimes = $\frac{6}{10}$

6 dimes is $\frac{3}{5}$ of a dollar.



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2. Leila has 3 quarters, 5 dimes, 2 nickels and 2 pennies.



(a) What fraction of her coins are quarters?
(b) What fraction of her coins are nickels?
(c) What fraction of her coins are dimes?

There are 12 coins altogether.

(a) $\frac{3}{12} = \frac{1}{4}$

$\frac{1}{4}$ of her coins are quarters.

(b) $\frac{2}{12} = \frac{1}{6}$

$\frac{1}{6}$ of her coins are nickels.

(c) 5 out of 12 coins are dimes.

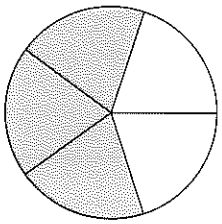
$\frac{5}{12}$ of her coins are dimes.

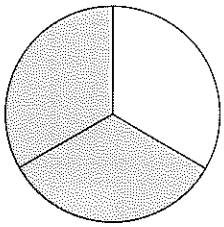
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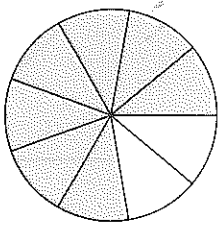
Name: _____ Class: _____ Date: _____

Exercise 1A : Fraction of a Whole

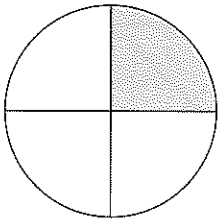
1. Match the circles to the correct fractions.

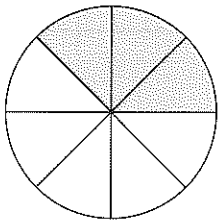
(a) 

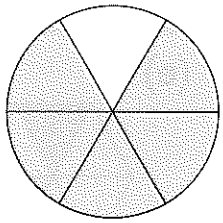
(b) 

(c) 

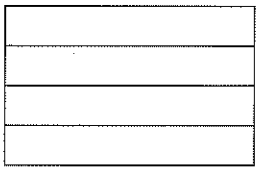
$\frac{2}{3}$ $\frac{1}{4}$ $\frac{3}{5}$ $\frac{5}{6}$ $\frac{3}{8}$ $\frac{7}{9}$

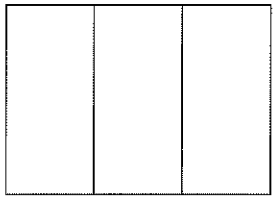
(d) 

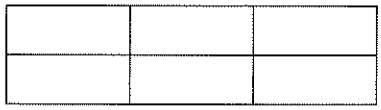
(e) 

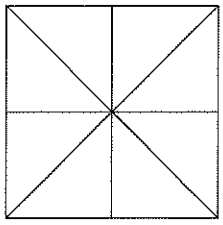
(f) 

2. Color each figure to show the given fraction.

(a)  $\frac{3}{4}$

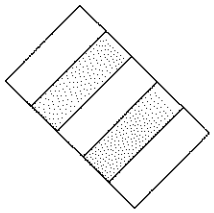
(b)  $\frac{2}{3}$

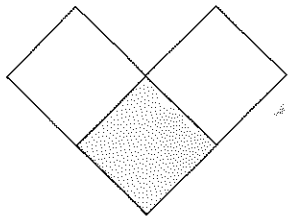
(c)  $\frac{1}{6}$

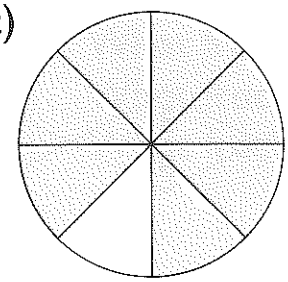
(d)  $\frac{7}{8}$

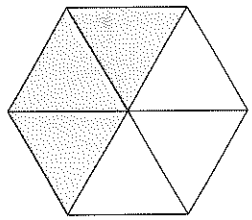
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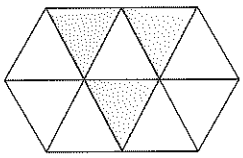
3. What fraction of the shape is shaded?

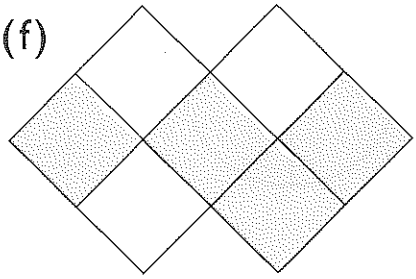
(a) 

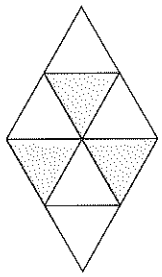
(b) 

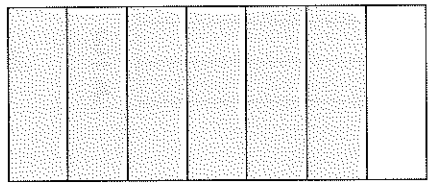
(c) 

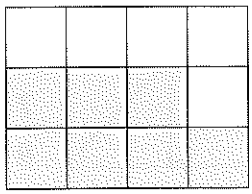
(d) 

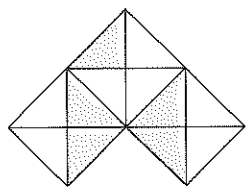
(e) 

(f) 

(g) 

(h) 

(i) 

(j) 

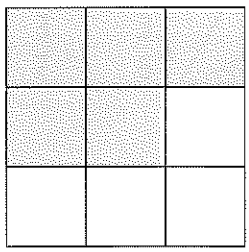
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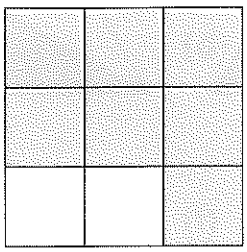
Exercise 1B : Fraction of a Whole

1. Circle the greater fraction.

(a)

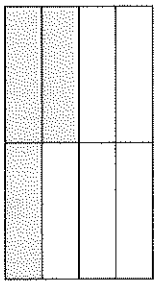


$\frac{5}{9}$

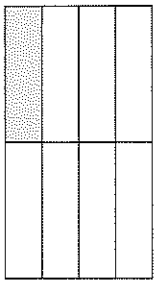


$\frac{7}{9}$

(b)

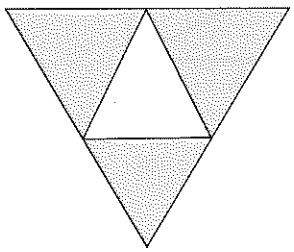


$\frac{3}{8}$

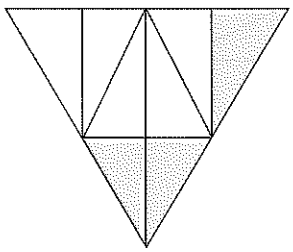


$\frac{1}{8}$

(c)

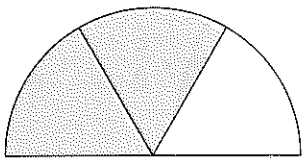


$\frac{3}{4}$

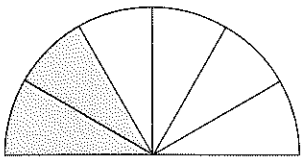


$\frac{3}{8}$

(d)



$\frac{2}{3}$

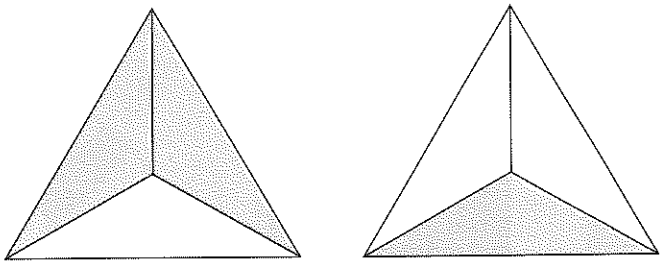


$\frac{2}{6}$

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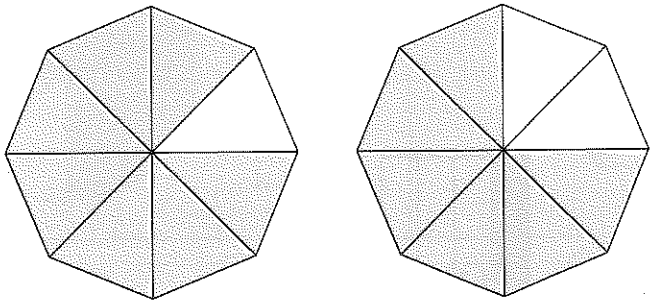
2. Circle the smaller fraction.

(a)



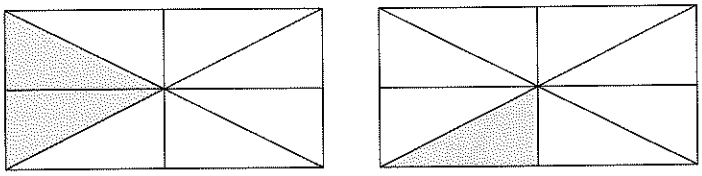
$\frac{2}{3}$ $\frac{1}{3}$

(b)



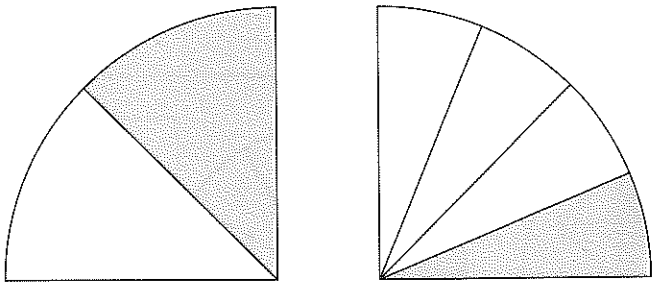
$\frac{7}{8}$ $\frac{6}{8}$

(c)



$\frac{2}{8}$ $\frac{1}{8}$

(d)



$\frac{1}{2}$ $\frac{1}{4}$

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3. Circle the greatest fraction.

(a) $\frac{1}{5}$, $\frac{1}{3}$, $\frac{1}{8}$

(b) $\frac{7}{8}$, $\frac{7}{10}$, $\frac{7}{9}$

(c) $\frac{3}{7}$, $\frac{3}{6}$, $\frac{3}{5}$

(d) $\frac{1}{12}$, $\frac{1}{10}$, $\frac{1}{8}$

(e) $\frac{3}{6}$, $\frac{5}{6}$, $\frac{1}{6}$

(f) $\frac{10}{12}$, $\frac{9}{12}$, $\frac{8}{12}$

(g) $\frac{6}{7}$, $\frac{5}{7}$, $\frac{3}{7}$

(h) $\frac{2}{9}$, $\frac{5}{9}$, $\frac{8}{9}$

4. Circle the smallest fraction.

(a) $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$

(b) $\frac{1}{6}$, $\frac{1}{5}$, $\frac{1}{9}$

(c) $\frac{2}{8}$, $\frac{2}{6}$, $\frac{2}{3}$

(d) $\frac{5}{9}$, $\frac{5}{12}$, $\frac{5}{10}$

(e) $\frac{3}{5}$, $\frac{4}{5}$, $\frac{2}{5}$

(f) $\frac{9}{10}$, $\frac{7}{10}$, $\frac{6}{10}$

(g) $\frac{4}{6}$, $\frac{3}{6}$, $\frac{5}{6}$

(h) $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$

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5. Arrange the numbers in order, beginning with the greatest.

(a) $\frac{1}{7}$, $\frac{1}{6}$, $\frac{1}{5}$ _____

(b) $\frac{4}{12}$, $\frac{4}{5}$, $\frac{4}{7}$ _____

(c) 1, $\frac{2}{3}$, $\frac{1}{3}$ _____

(d) $\frac{1}{8}$, $\frac{7}{8}$, $\frac{5}{8}$ _____

(e) $\frac{3}{5}$, $\frac{3}{4}$, $\frac{3}{7}$ _____

6. Arrange the numbers in order, beginning with the smallest.

(a) $\frac{1}{5}$, 1, $\frac{1}{7}$ _____

(b) $\frac{5}{9}$, $\frac{5}{6}$, $\frac{5}{7}$ _____

(c) $\frac{3}{5}$, $\frac{4}{5}$, $\frac{2}{5}$ _____

(d) $\frac{9}{12}$, $\frac{5}{12}$, $\frac{10}{12}$ _____

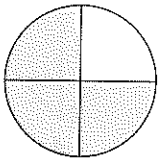
(e) $\frac{2}{7}$, $\frac{2}{9}$, $\frac{2}{3}$ _____

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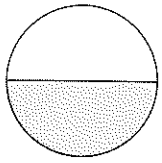
Name: _____ Class: _____ Date: _____

Exercise 2 : Equivalent Fractions

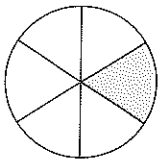
1. Match each pair of equivalent fractions.



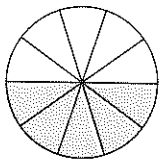
$\frac{3}{4}$



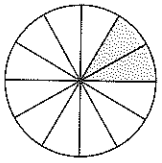
$\frac{1}{2}$



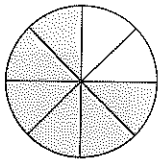
$\frac{1}{6}$



$\frac{5}{10}$



$\frac{2}{12}$



$\frac{6}{8}$

2. Write the missing numerators.

$\frac{1}{2}$	$\frac{1}{2}$

$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$

$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$

$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$

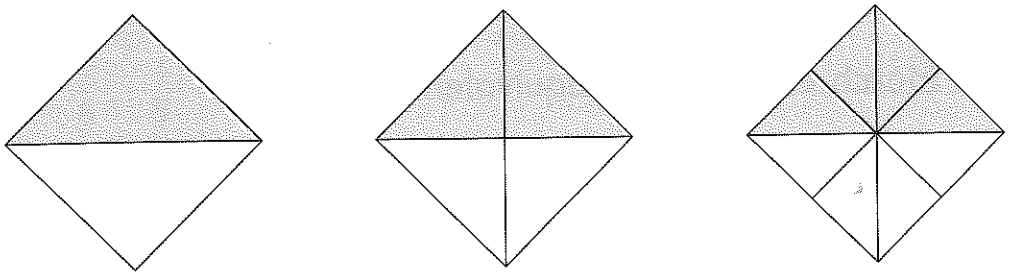
(a) $\frac{1}{2} = \frac{\square}{6}$ (b) $\frac{2}{3} = \frac{\square}{12}$ (c) $\frac{3}{6} = \frac{\square}{2}$

(d) $\frac{2}{12} = \frac{\square}{6}$ (e) $\frac{8}{12} = \frac{\square}{6}$ (f) $\frac{5}{6} = \frac{\square}{12}$

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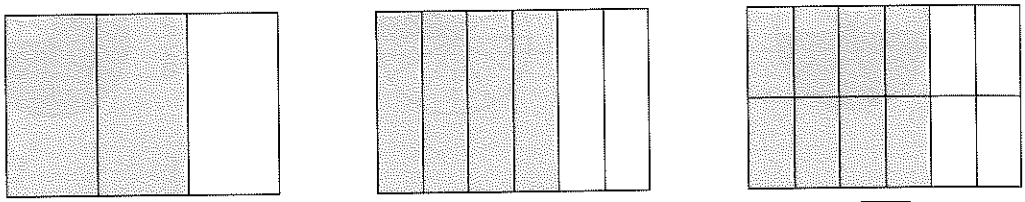
3. Write the missing numerators and denominators.

(a)



$\frac{1}{2} = \frac{\square}{4} = \frac{4}{\square}$

(b)



$\frac{2}{3} = \frac{4}{\square} = \frac{\square}{12}$

4. Write the missing numerators and denominators.

(a) $\frac{3}{4} \overset{\times 3}{\underset{\times 3}{\rightleftarrows}} \frac{\square}{\square}$

(b) $\frac{5}{6} \overset{\times 2}{\underset{\times 2}{\rightleftarrows}} \frac{\square}{\square}$

(c) $\frac{2}{3} \overset{\times 4}{\underset{\times 4}{\rightleftarrows}} \frac{\square}{\square}$

(d) $\frac{1}{2} \overset{\times 5}{\underset{\times 5}{\rightleftarrows}} \frac{\square}{\square}$

(e) $\frac{6}{8} \overset{\div 2}{\underset{\div 2}{\rightleftarrows}} \frac{\square}{\square}$

(f) $\frac{3}{9} \overset{\div 3}{\underset{\div 3}{\rightleftarrows}} \frac{\square}{\square}$

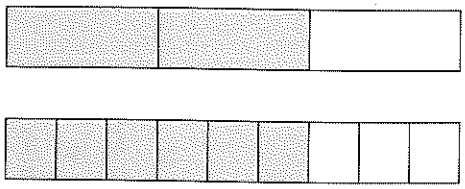
(g) $\frac{6}{12} \overset{\div 6}{\underset{\div 6}{\rightleftarrows}} \frac{\square}{\square}$

(h) $\frac{4}{12} \overset{\div 4}{\underset{\div 4}{\rightleftarrows}} \frac{\square}{\square}$

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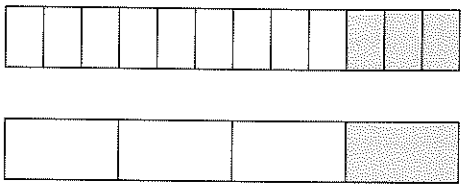
5. Write the equivalent fraction for each of the following.

(a)



$\frac{2}{3} =$

(b)



$\frac{3}{12} =$

6. Join the equivalent fractions.

$\frac{5}{6}$ $\frac{2}{3}$ $\frac{3}{5}$ $\frac{1}{4}$ $\frac{1}{2}$ $\frac{4}{12}$ $\frac{8}{10}$ $\frac{6}{8}$

$\frac{8}{12}$ $\frac{2}{6}$ $\frac{2}{8}$ $\frac{10}{12}$ $\frac{5}{10}$ $\frac{3}{4}$ $\frac{6}{10}$ $\frac{4}{5}$

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7. Write the simplest equivalent fraction for each fraction.

(a) $\frac{2}{4}$ =

(b) $\frac{4}{6}$ =

(c) $\frac{8}{10}$ =

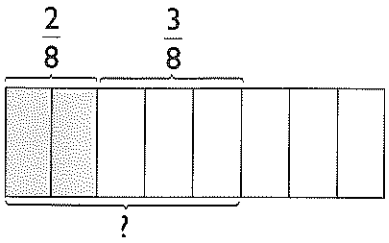
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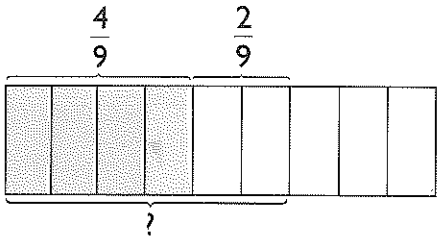
Exercise 3 : Adding Fractions

1. Add.

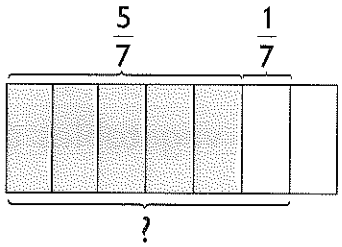
(a) $\frac{2}{8} + \frac{3}{8} =$



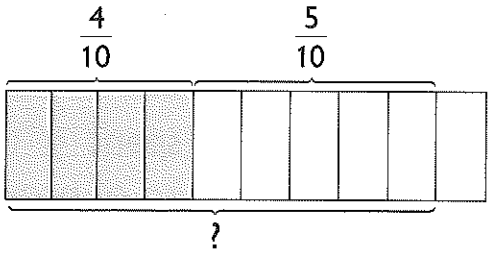
(b) $\frac{4}{9} + \frac{2}{9} =$



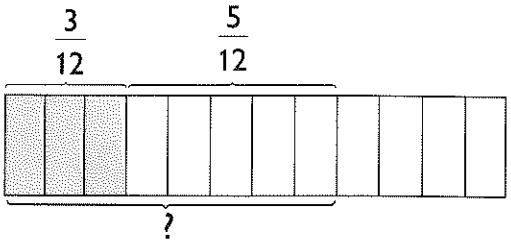
(c) $\frac{5}{7} + \frac{1}{7} =$



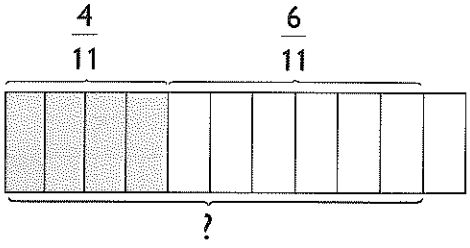
(d) $\frac{4}{10} + \frac{5}{10} =$



(e) $\frac{3}{12} + \frac{5}{12} =$



(f) $\frac{4}{11} + \frac{6}{11} =$



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2. Do these. Show all your work clearly.

(a) Josh ate $\frac{2}{6}$ of a pizza.

Mary ate $\frac{3}{6}$ of the same pizza.

What fraction of the pizza did they eat altogether?

(b) Mrs. Li spent $\frac{4}{9}$ of her money on vegetables and $\frac{3}{9}$ of it on 2 kg of prawns.
What fraction of her money did she spend altogether?

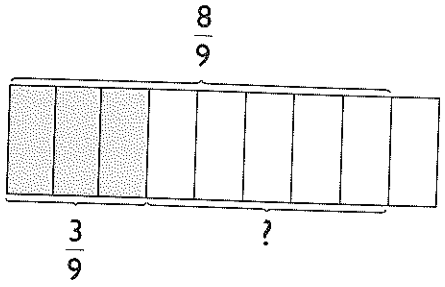
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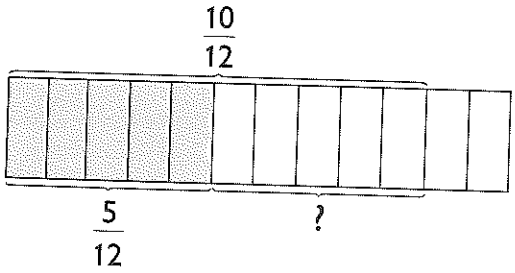
Exercise 4 : Subtracting Fractions

1. Subtract.

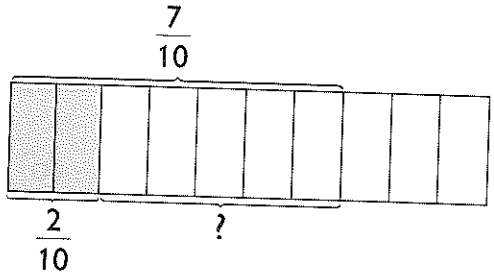
(a) $\frac{8}{9} - \frac{3}{9} =$



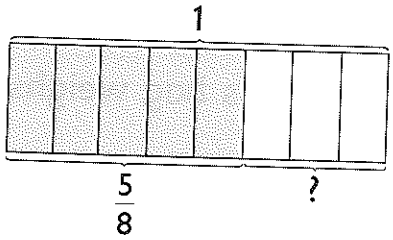
(b) $\frac{10}{12} - \frac{5}{12} =$



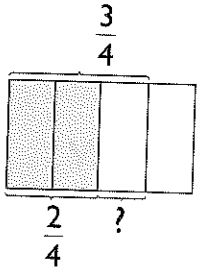
(c) $\frac{7}{10} - \frac{2}{10} =$



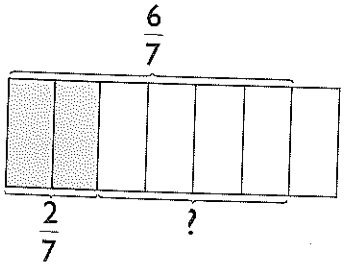
(d) $1 - \frac{5}{8} =$



(e) $\frac{3}{4} - \frac{2}{4} =$



(f) $\frac{6}{7} - \frac{2}{7} =$



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2. Do these. Show all your work clearly.

(a) Cloth A is $\frac{8}{12}$ yd long.

Cloth B is $\frac{5}{12}$ yd long.

How much longer is Cloth A than Cloth B?

(b) Diane's bag weighs $\frac{9}{10}$ kg.

George's bag weighs $\frac{3}{10}$ kg.

How much lighter is George's bag than Diane's bag?

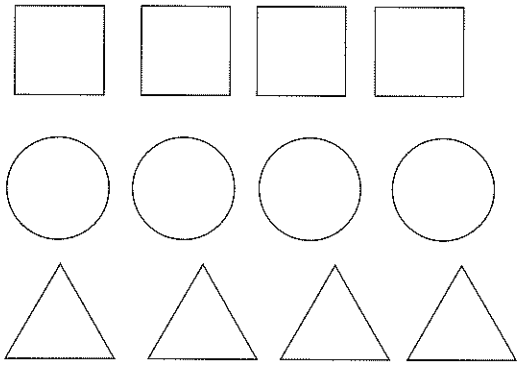
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Exercise 5 : Fraction of a Set

1. Fill in the blanks.

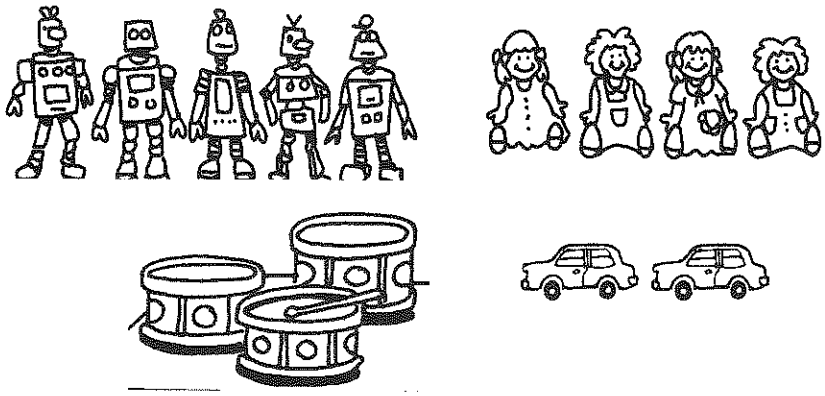
(a)



What fraction of the shapes are triangles?

_____

(b)



What fraction of the toys are toy cars?

_____

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2. Fill in the blanks.

(a) Find $\frac{2}{10}$ of 30.

_____

(b) Find $\frac{3}{8}$ of 64.

_____

(c) Find $\frac{5}{9}$ of 81.

_____

(d) What is $\frac{2}{7}$ of 63?

_____

(e) What is $\frac{7}{12}$ of 144?

_____

(f) What is $\frac{5}{6}$ of 120?

_____

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Name: _____ Class: _____ Date: _____

Exercise 6 : Fractions and Money

1. Fill in the blanks.

   (a) What fraction of a dollar is 80 pennies?

   _____

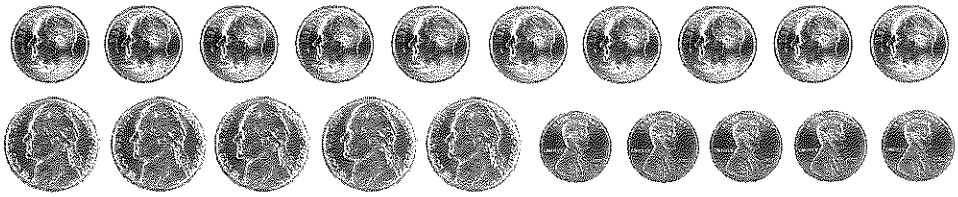
   (b) What fraction of a dollar is 6 dimes?

   _____

   (c) What fraction of a dollar is 3 quarters?

   _____

2. Fill in the missing numbers.



   (a) $\frac{\square}{\square}$ of the coins are nickels.

   (b) $\frac{\square}{\square}$ of the coins are dimes.

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3. Write each amount of money as a fraction of a dollar.

(a) \$0.35 $= \frac{\square}{\square}$

(b) \$0.80 $= \frac{\square}{\square}$

4. Do this. Show your working clearly.



\$2



\$4



\$2

Danny had \$10. He bought a doll, a toy aeroplane and a toy car.

(a) What fraction of his money was spent on the doll?

(b) What fraction of his money was not spent?

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Unit 11 : Time

Friendly Notes

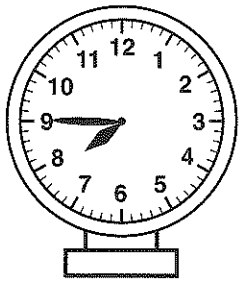
Hours and Minutes

The hour (h) and minute (min) are units of time.

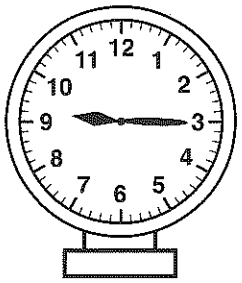
1 h = 60 min

a.m. means after 12:00 midnight and before 12:00 noon.

p.m. means after 12:00 noon and before 12:00 midnight.



7:45

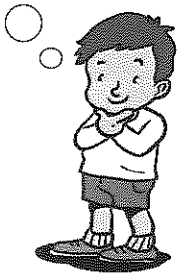


9:15

We read 7:45 as seven forty-five.
7:45 is 15 minutes before 8 o'clock.
It is fifteen minutes to eight.

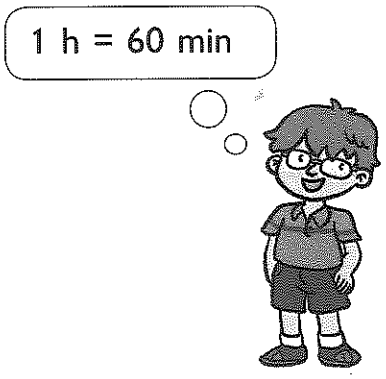


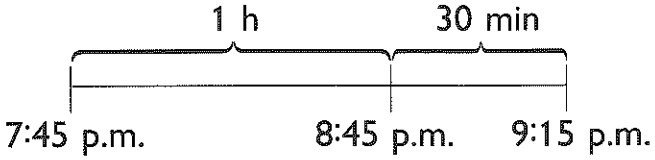
We read 9:15 as nine fifteen.
9:15 is 15 minutes past 9 o'clock.
It is fifteen minutes past nine.



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1. Kenny started doing his homework at 7:45 p.m.
He finished doing it at 9:15 p.m.
How many minutes did he take to complete his homework?



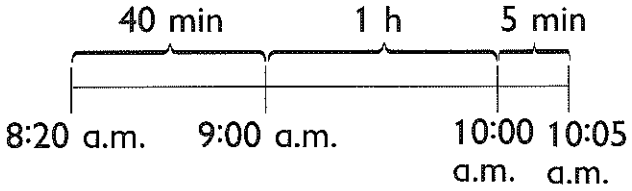


He took 1 h 30 min to complete his homework.

1 h 30 min = 60 min + 30 min
= 90 min

He took 90 min to complete his homework.

2. Philip started swimming at 8:20 a.m.
He swam for 1 h 45 min.
What time did he stop swimming?



He stopped swimming at 10:05 a.m.

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Other Units of Time

The second (s) is another unit of time.

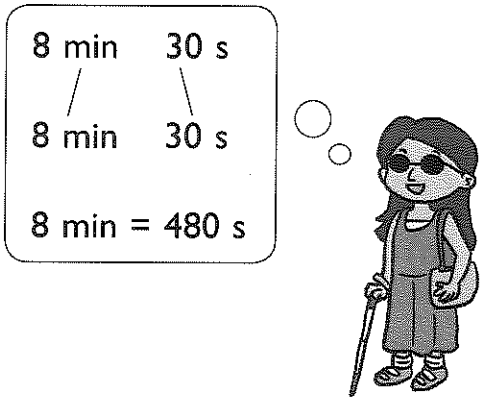
1 min = 60 s

The year, month, week and day are other units of time.

1 year = 12 months

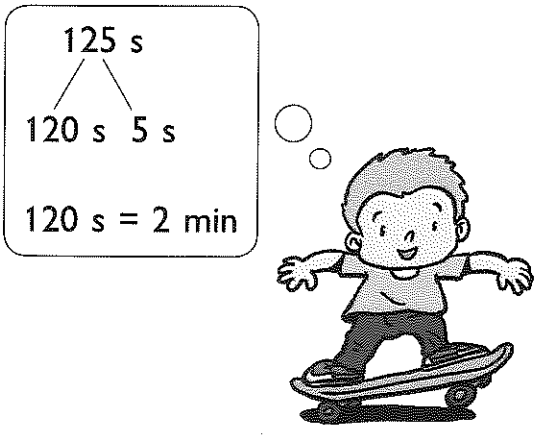
1 week = 7 days

1. (a) Write 8 min 30 s in seconds.



8 min 30 s = 510 s

(b) Write 125 s in minutes and seconds.



125 s = 2 min 5 s

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2. (a) Write 2 years 5 months in months.

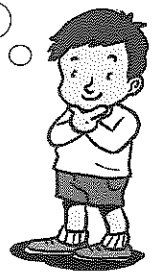
2 years 5 months
24 months 5 months



2 years 5 months = 29 months

(b) Write 20 months in years and months.

20 months
12 months 8 months
1 yr = 12 months



20 months = 1 year 8 months

3. (a) Write 4 weeks 5 days in days.

4 weeks 5 days
28 days 5 days
1 week = 7 days



4 weeks 5 days = 33 days

(b) Write 41 days in weeks and days.

41 days
35 days 6 days



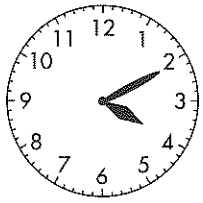
41 days = 5 weeks 6 days

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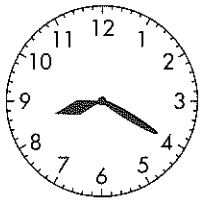
Exercise 1A : Hours and Minutes

1. Fill in the blanks.

(a) 

_____ minutes after _____ o'clock.

_____ minutes past _____.

(b) 

_____ minutes after _____ o'clock.

_____ minutes past _____.

(c) 

_____ minutes before _____ o'clock.

_____ minutes to _____.

(d) 

_____ minutes before _____ o'clock.

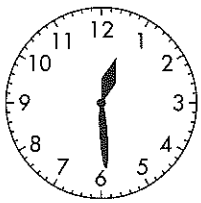
_____ minutes to _____.

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2. What time is it?

(a) 

_____

(b) 

_____

(c) 

_____

(d) 

_____

(e) 

_____

(f) 

_____

3. Write the time using 'a.m.' or 'p.m.'.

(a) 2 h 30 min after midnight is _____.

(b) 3 h 40 min before midnight is _____.

(c) 4 h 15 min after noon is _____.

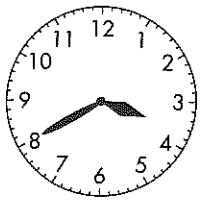
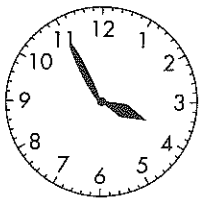
(d) 7 h 45 min before noon is _____.

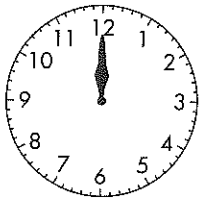
(e) 10 h before midnight is _____.

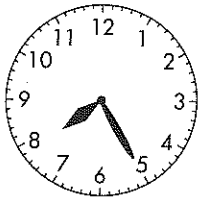
(f) 1 h 50 min after noon is _____.

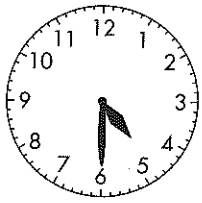
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Complete the following.

(a)  ____ min later 

(b)  ____ h later 

(c)  ____ h ____ min later 

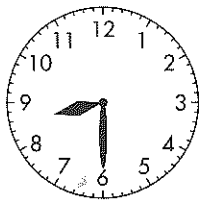
(d)  ____ h ____ min later 

(e)  ____ h ____ min later 

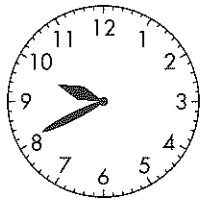
Pearson Education South Asia Pte Ltd

5. Fill in the blanks.

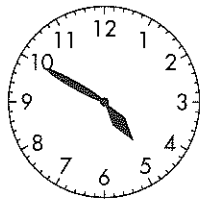
(a) The time is 8:30 a.m.
35 minutes later, it will be _____.



(b) The time is 9:40 p.m.
40 minutes later, it will be _____.



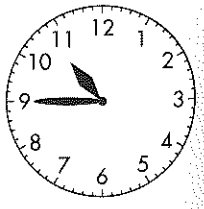
(c) The time is 4:50 p.m.
20 minutes later, it will be _____.



(d) The time is 6:15 p.m.
2 hours 30 minutes later,
it will be _____.



(e) The time is 10:45 p.m.
1 hour 25 minutes later,
it will be _____.



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Exercise 1B : Hours and Minutes

1. Do these. Show your work clearly.

(a) A television program started at 6:45 p.m. and lasted 35 minutes.
What time did the program end?

The program ended at _____.

(b) Ryan went to bed at 11:00 p.m.
He woke up at 6:30 a.m.
For how long did he sleep?

He slept for _____.

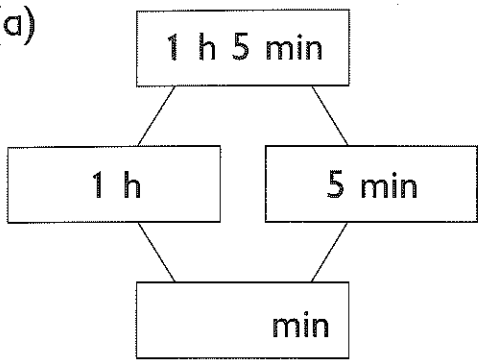
(c) A bank opens from 8:30 a.m. to 4:30 p.m. every day.
How many hours a day is the bank open?

The bank is open _____ hours a day.

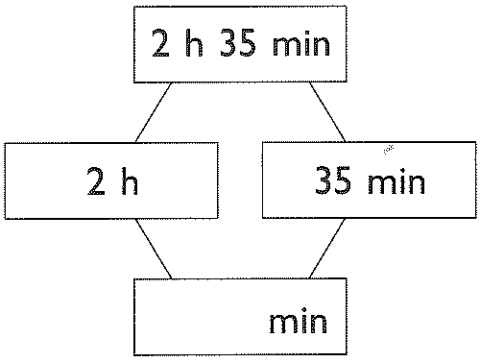
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2. Write the missing numbers.

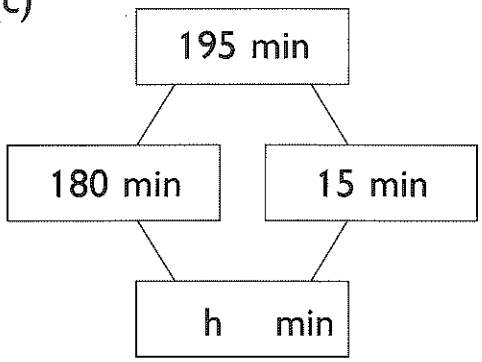
(a)



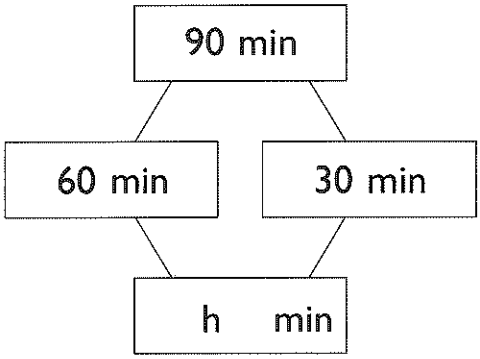
(b)



(c)



(d)



3. Fill in the blanks.

(a) 1 h 40 min = _____ min

(b) 2 h 55 min = _____ min

(c) 3 h 25 min = _____ min

(d) 4 h 5 min = _____ min

(e) 95 min = _____ h _____ min

(f) 110 min = _____ h _____ min

(g) 135 min = _____ h _____ min

(h) 285 min = _____ h _____ min

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4. Add.

(a) 1 h 10 min + 25 min = _____ h _____ min

(b) 2 h 35 min + 15 min = _____ h _____ min

(c) 1 h 5 min + 1 h 30 min = _____ h _____ min

(d) 2 h 40 min + 2 h 25 min = _____ h _____ min

(e) 3 h 25 min + 1 h 35 min = _____ h _____ min

5. Subtract.

(a) 1 h 35 min – 15 min = _____ h _____ min

(b) 2 h 10 min – 20 min = _____ h _____ min

(c) 2 h 45 min – 1 h 5 min = _____ h _____ min

(d) 3 h 20 min – 1 h 55 min = _____ h _____ min

(e) 4 h 40 min – 2 h 45 min = _____ h _____ min

6. Do these. Show all your work clearly.

(a) Ashley started cleaning her house at 8:15 a.m.
She cleaned for 2 hours and 30 minutes.
What time did she finish cleaning her house?

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(b) Emily spent 1 hour 20 minutes doing her Mathematics homework and 1 hour 55 minutes doing her English homework.
How much time did she spend doing all her homework?

(c) Mrs. Coles took 1 hour 15 minutes to drive from her house to the airport.
Mrs. Ray took 55 minutes to drive the same route.
Who took a shorter time?
How much shorter?

(d) A track meet started at 1:45 p.m. and ended at 4:35 p.m.
How long did the track meet last?

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Name: _____ Class: _____ Date: _____

Exercise 2 : Other Units of Time

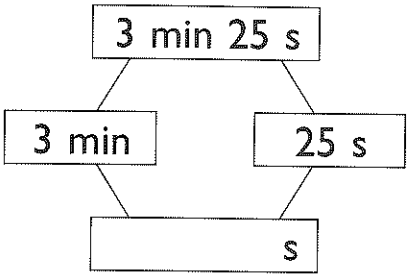
1. Write the missing numbers.

(a) 52 seconds → + ____ seconds → 1 minute

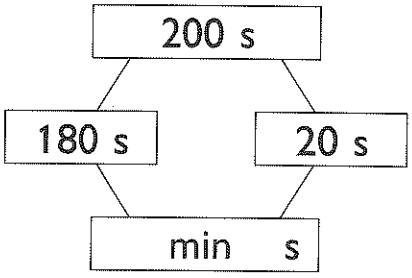
(b) 1 minute → – ____ seconds → 41 seconds

2. Write the missing numbers.

(a)



(b)



3. Fill in the blanks.

(a) 1 min 25 s = _____ s

(b) 2 min 35 s = _____ s

(c) 3 min 10 s = _____ s

(d) 115 s = _____ min _____ s

(e) 165 s = _____ min _____ s

(f) 240 s = _____ min _____ s

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4. Match.

(a) 2 years 4 months

(b) 1 year 10 months

22 months | 28 months | 37 months | 33 months

(c) 2 years 9 months

(d) 3 years 1 month

5. Fill in the blanks.

(a) 2 years 11 months = _____ months

(b) 28 months = _____ years _____ months

6. Match.

(a) 3 weeks 3 days

(b) 2 weeks 1 day

15 days | 24 days | 11 days | 26 days

(c) 1 week 4 days

(d) 3 weeks 5 days

7. Fill in the blanks.

(a) 2 weeks 6 days = _____ days

(b) 22 days = _____ weeks _____ day

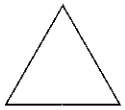
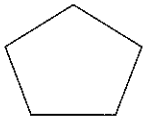
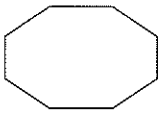
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Unit 12 : Geometry

Friendly Notes

Angles

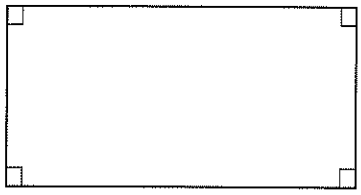
A polygon is a closed figure with straight sides. So, a circle is not a polygon. Any two sides of a polygon form an angle. A polygon has as many sides as angles.

Polygon	Number of sides	Number of angles
triangle 	3	3
quadrilateral 	4	4
pentagon 	5	5
hexagon 	6	6
octagon 	8	8

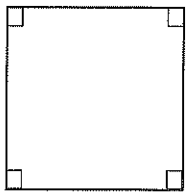
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Right Angles

A rectangle and a square have 4 right angles each.

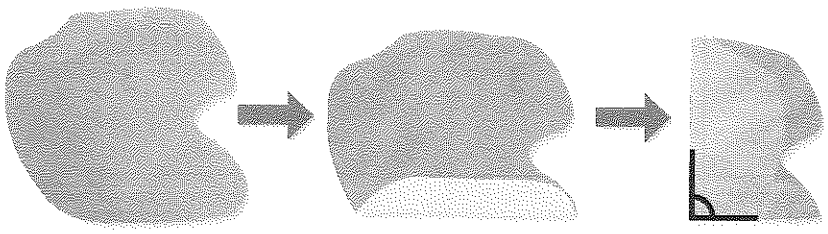


Rectangle

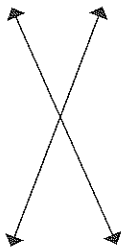


Square

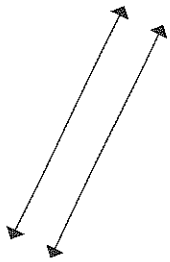
We can make a right angle by folding a piece of paper twice as shown below:



Quadrilaterals and Triangles



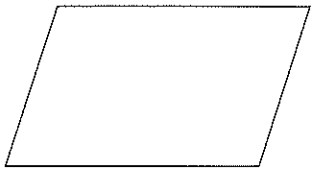
These lines intersect.



These lines are parallel.
They will never intersect.

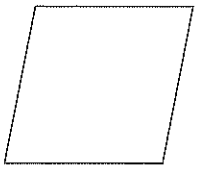
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A quadrilateral is a polygon with 4 sides.
A **parallelogram** is a quadrilateral that has pairs of sides that are parallel.



parallelogram

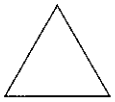
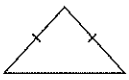
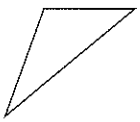
A **rhombus** is a parallelogram with 4 equal sides.



rhombus

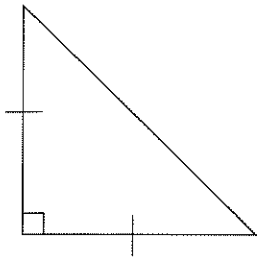
A **triangle** does not have parallel sides.

We name triangles as follows:

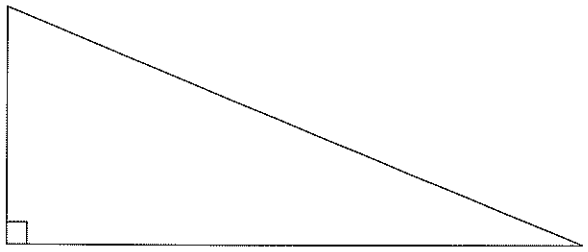
Triangle	Number of equal sides	Number of equal angles
equilateral 	3	3
isosceles 	2	2
scalene 	0	0

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A **right triangle** is a triangle with a right angle.
A triangle cannot have 2 right angles.
A right triangle can be scalene or isosceles.



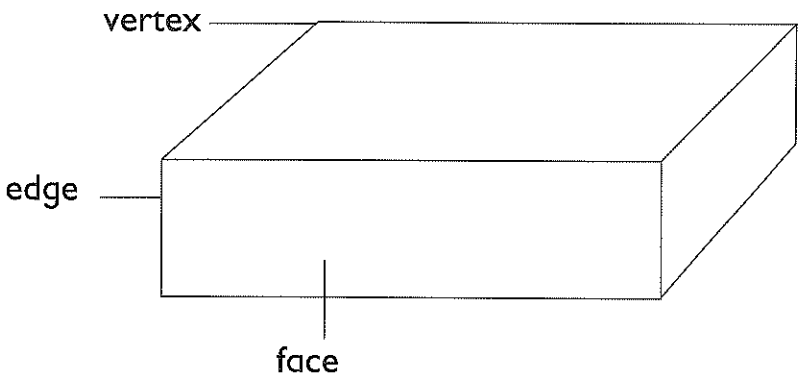
Isosceles right triangle



Scalene right triangle

Solid Figures

Solid figures have faces, edges and vertices.



A rectangular prism has 6 faces, 12 edges and 8 vertices.

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Name: _____ Class: _____ Date: _____

Exercise 1 : Angles

1. Complete the table below.

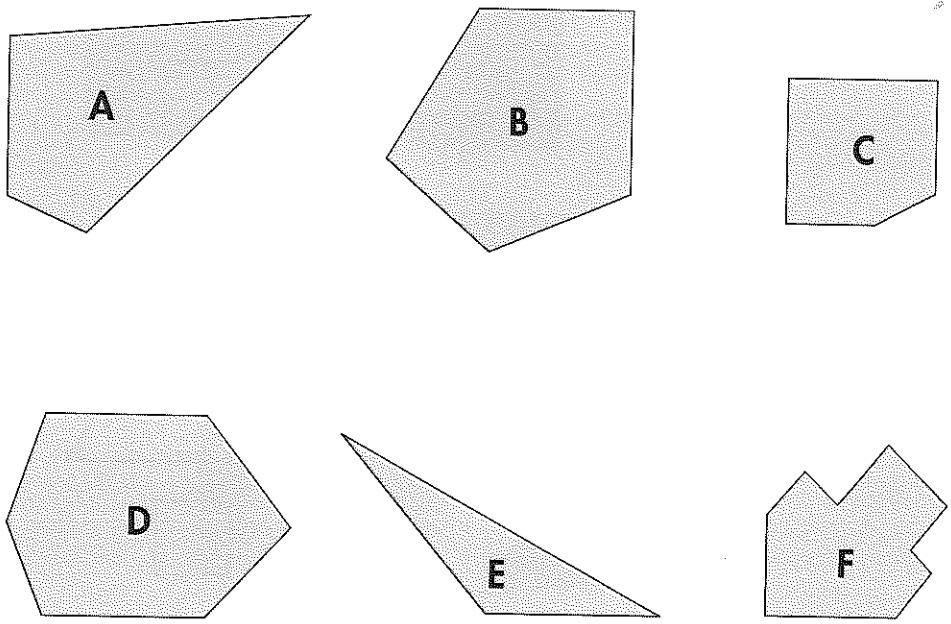
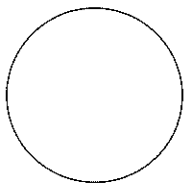


	Figure	Number of sides	Number of angles
(a)	A		
(b)	B		
(c)	C		
(d)	D		
(e)	E		
(f)	F		

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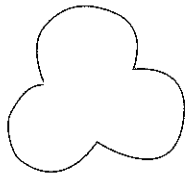
2. Check (✓) the box below the figure if it is a polygon.

(a)



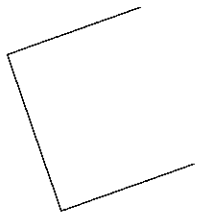
☐

(b)



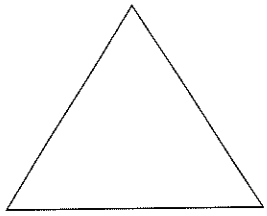
☐

(c)



☐

(d)



☐

3. Fill in the blanks.

How many angles and sides does each of these polygons have?

(a) quadrilateral

_____ angles

_____ sides

(b) octagon

_____ sides

_____ angles

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Name: _____ Class: _____ Date: _____

Exercise 2 : Right Angles

1. Complete the table below.

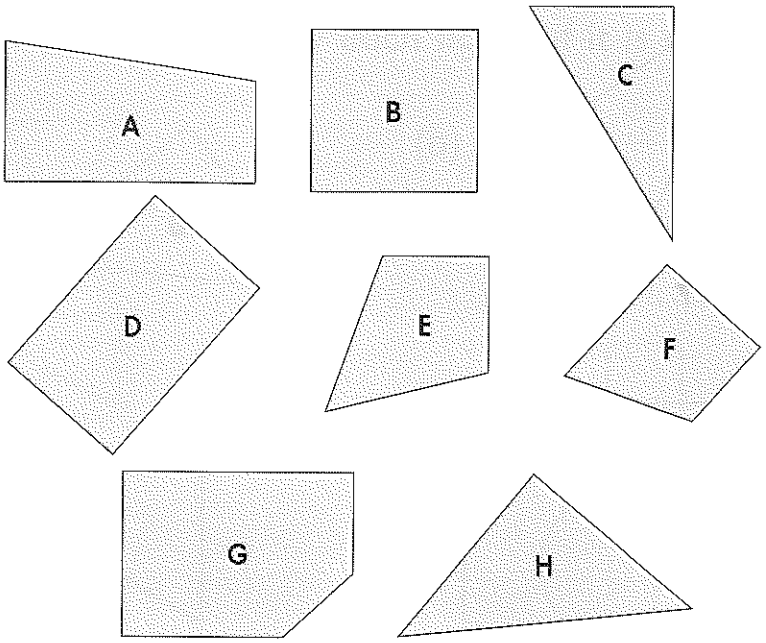
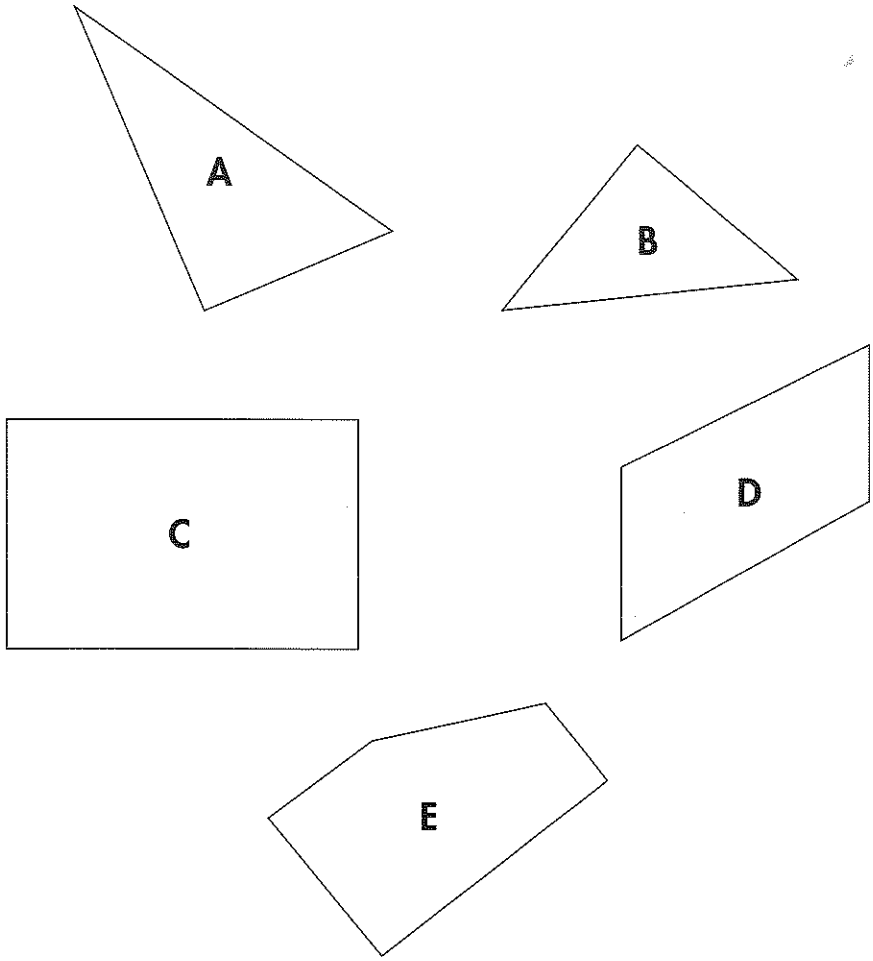


Figure	Number of sides	Number of angles	Number of right angles
A			
B			
C			
D			
E			
F			
G			
H			

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2. Which of the following figures have at least one angle that is greater than a right angle?



Figures _____

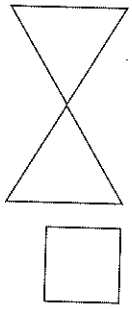
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Name: _____ Class: _____ Date: _____

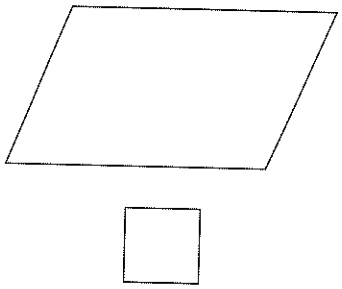
Exercise 3 : Quadrilaterals and Triangles

1. Check (✓) the box below each figure if it is a parallelogram.

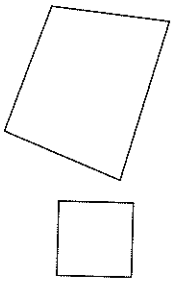
(a)



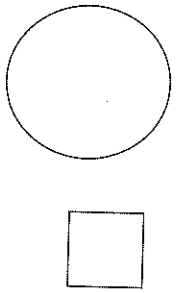
(b)



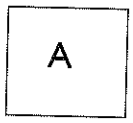
(c)



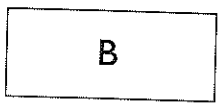
(d)



2. Which of the following quadrilaterals have 2 pairs of parallel sides?



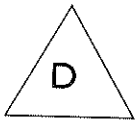
square



rectangle



trapezium



triangle



semicircle



rhombus

Quadrilaterals _____

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3. Name the triangles.

(a) This triangle has 2 equal sides.

_____ triangle

(b) This triangle has 3 equal sides.

_____ triangle

(c) This triangle has no equal sides.

_____ triangle

4. Use the words in the box to fill in the blanks.

right-angled isosceles	right-angled scalene
equilateral	scalene

(a) This triangle has one right angle and two equal sides.

_____ triangle

(b) This triangle has one right angle and no equal sides.

_____ triangle

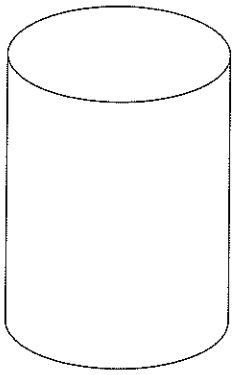
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Name: _____ Class: _____ Date: _____

Exercise 4 : Solid Figures

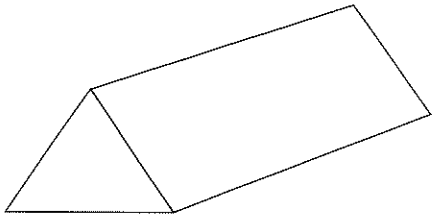
1. Name the solid figures.

(a)



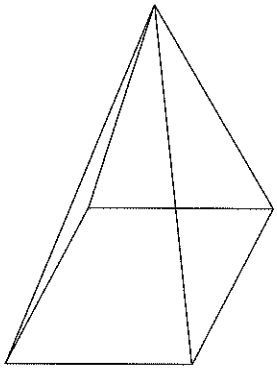
_____

(b)



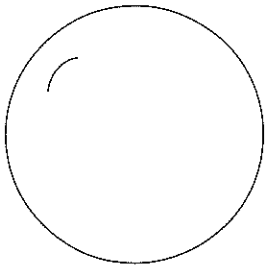
_____

(c)



_____

(d)



_____

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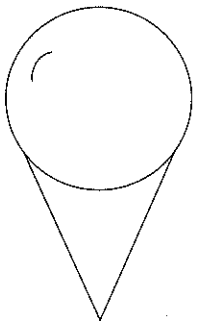
2. Fill in the blanks.

(a) A cylinder has _____ vertices.

(b) A cube has _____ faces, _____ edges and _____ vertices.

(c) A rectangular pyramid has _____ faces, _____ edges and _____ vertices.

3. Name the solids that are used to make the object below.



The object is made up of a _____ and a _____.

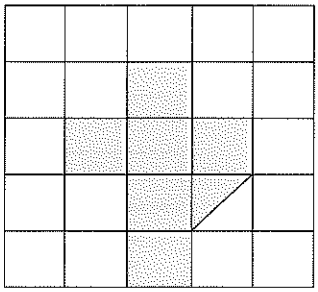
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Unit 13 : Area, Perimeter and Volume

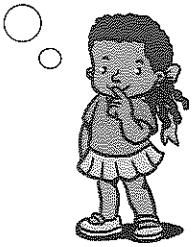
Friendly Notes

Area

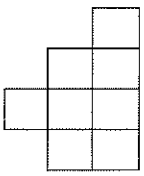
The space enclosed by the sides of a figure is its area.
The square centimeter and square inch are units of area.



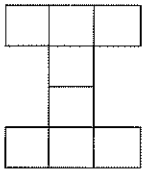
Each □ is 1 square unit.
Each ◿ is $\frac{1}{2}$ square unit.



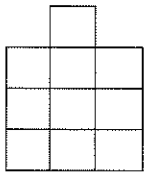
The area of the shaded part is $6\frac{1}{2}$ square units.



Shape A

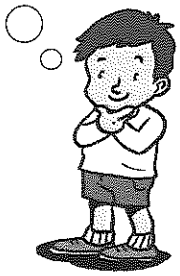


Shape B



Shape C

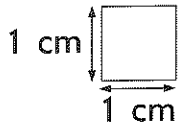
Each □ is 1 square unit.



Shape A = 8 square units
Shape B = 8 square units
Shape C = 10 square units
Shape A and Shape B have the same area.
Shape C has a greater area than Shape A and Shape B.

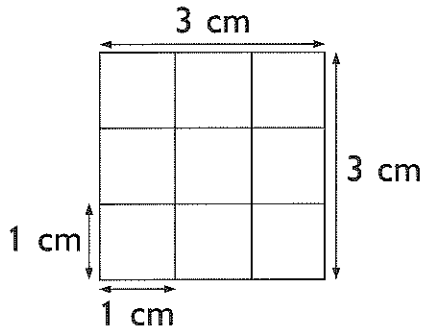
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This is a 1-cm square.



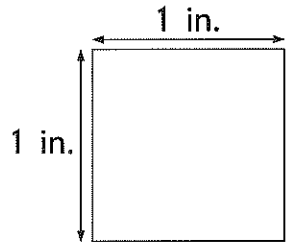
Its area is 1 square centimeter.

A 3-cm square is made up of nine 1-cm squares.

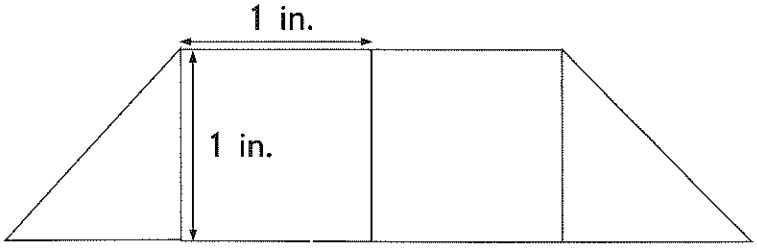


The area of a 3-cm square is 9 square centimeters.

Each side of this square is 1 inch long.



Its area is 1 square inch.

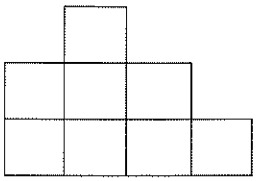


The area of the figure is 3 square inches.

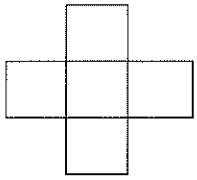
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Perimeter

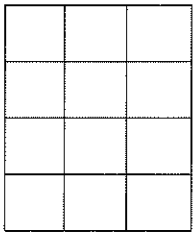
The distance around a figure is the perimeter of the figure.
The centimeter and inch are units of perimeter.



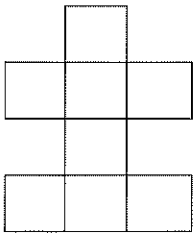
Shape A



Shape B



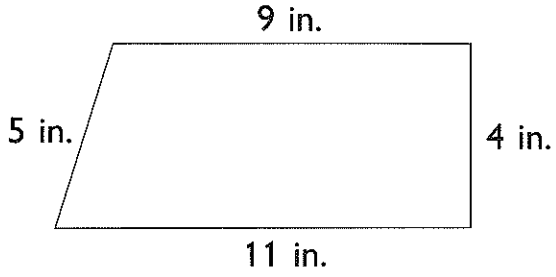
Shape C

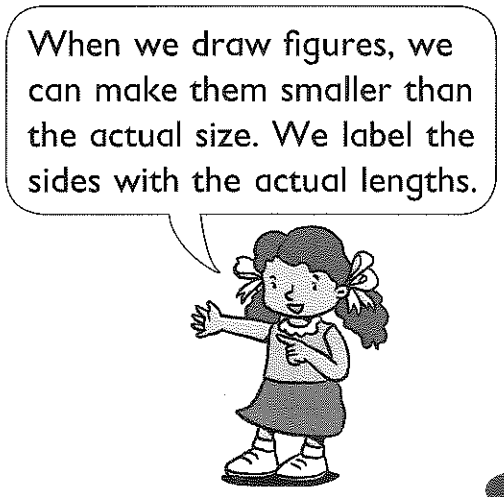


Shape D

Shape A and Shape C have the same perimeter.
Shape D has the greatest perimeter.
Shape A and Shape D have the same area but different perimeter.

The perimeter of the quadrilateral shown below is 29 in.



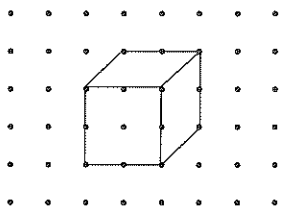


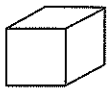
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Volume

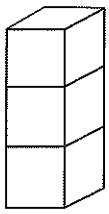
A solid is 3-dimensional.
The volume of a unit cube is 1 cubic unit.
The amount of space a solid occupies is its volume.

This is the drawing of a unit cube on a dotted paper.





a unit cube

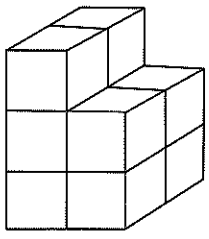


This solid is made up of
3 unit cubes.
Its volume is 3 cubic units.



The cubic centimeter (cm^3) is a unit of volume.
The volume of a 1-cm cube is 1 cubic centimeter (cm^3).

The solid is made up of 10 1-cm cubes.



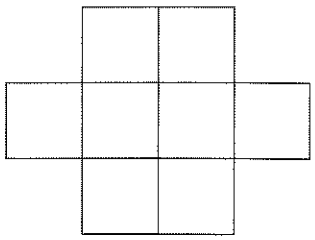
The volume of the solid is 10 cm^3.

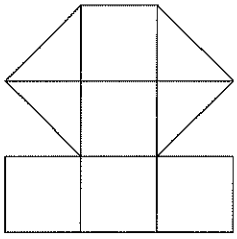
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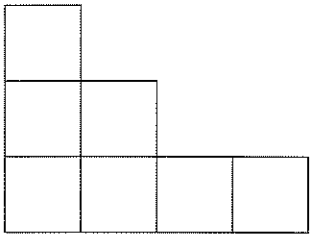
Name: _____ Class: _____ Date: _____

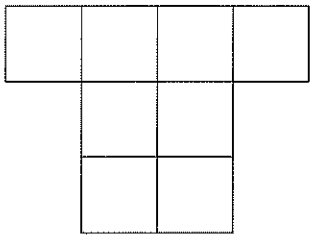
Exercise 1 : Area

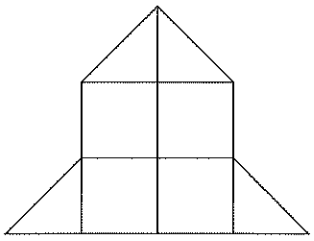
1. Match the shapes that have the same area.

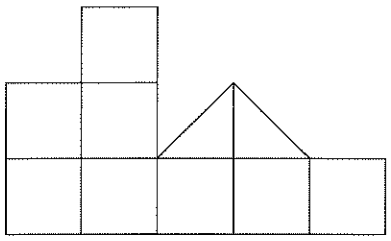


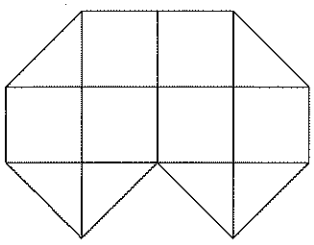


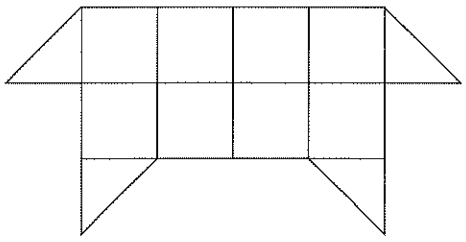


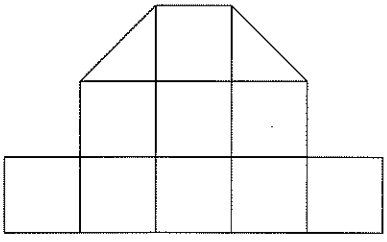


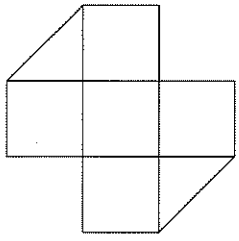












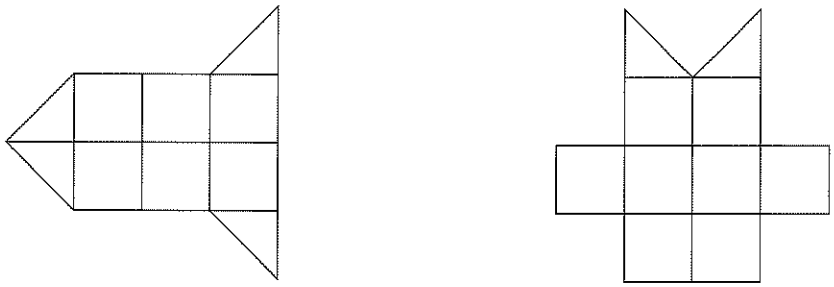
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2. Circle the shape with a greater area.

(a)



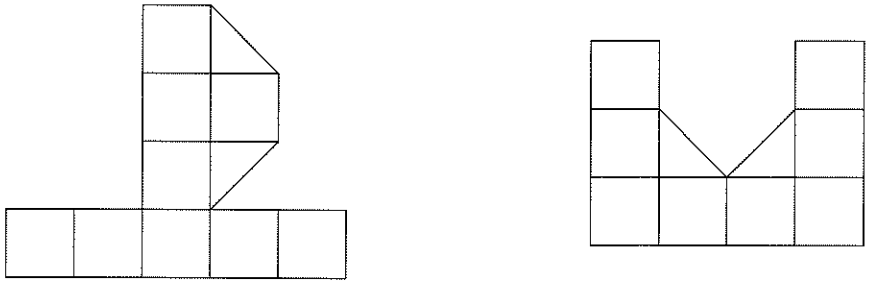
(b)



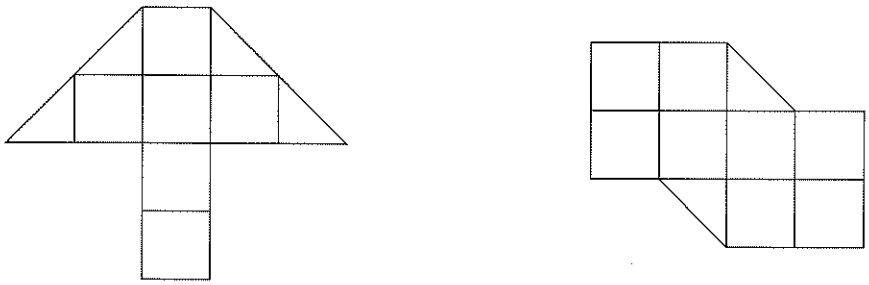
(c)



(d)



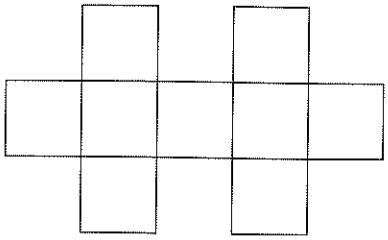
(e)



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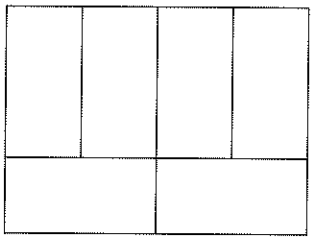
3. What is the area of each shape?

(a)



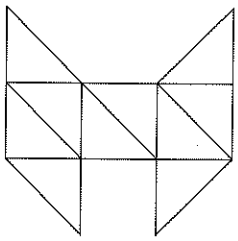
The area is ____ .

(b)



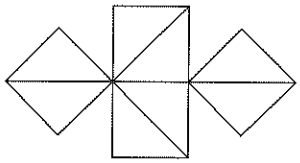
The area is ____ .

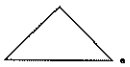
(c)



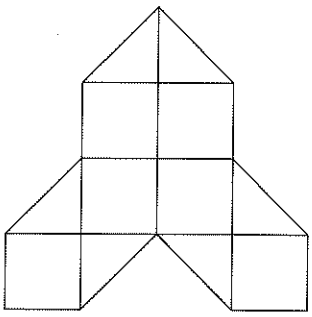
The area is ____ .

(d)



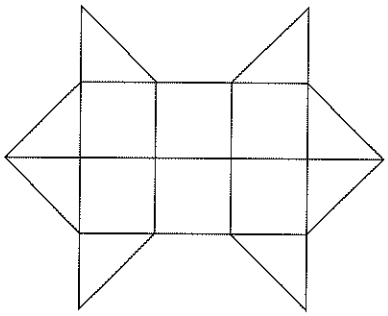
The area is ____ .

(e)



The area is ____ square units.

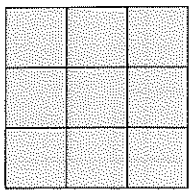
(f)



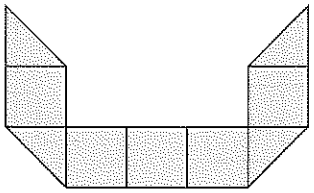
The area is ____ square units.

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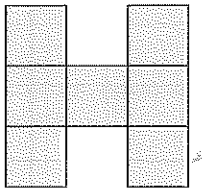
4. Find the area of each of the following figures.



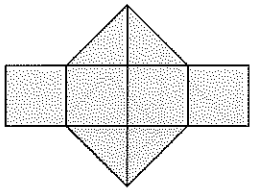
A



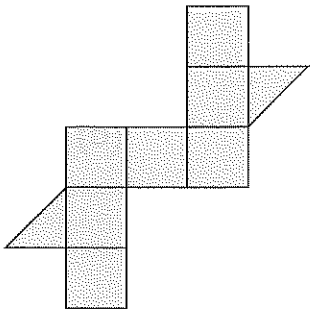
B



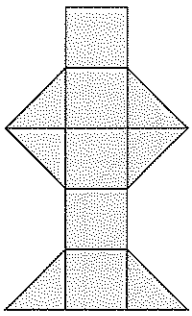
C



D



E



F

	Figure	Area
(a)	A	square units
(b)	B	square units
(c)	C	square units
(d)	D	square units
(e)	E	square units
(f)	F	square units

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5. (a) What is the area of each of the following figures?

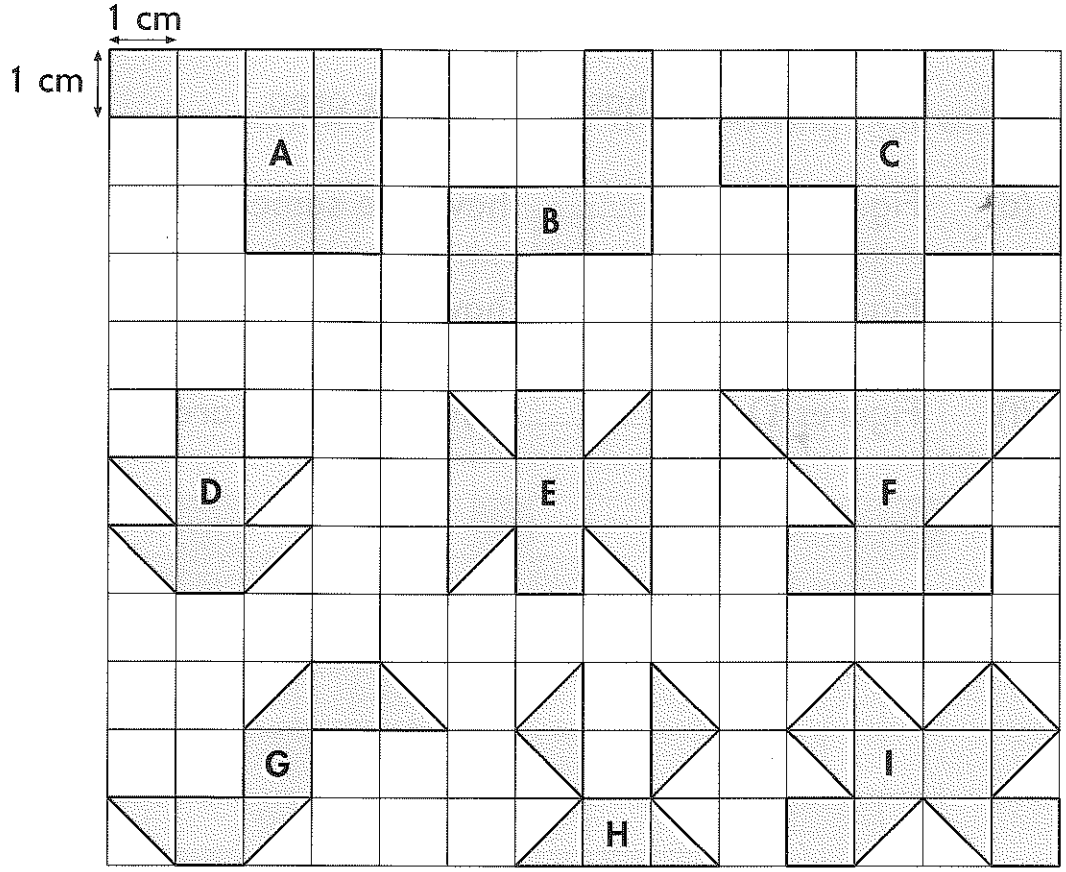


Figure	Area
A	cm^2
B	cm^2
C	cm^2
D	cm^2
E	cm^2
F	cm^2
G	cm^2
H	cm^2
I	cm^2

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(b) Figures _____ and _____ have the greatest area.

(c) Figure _____ has the smallest area.

(d) Figures A and _____ have the same area.

(e) Figures C and _____ have the same area.

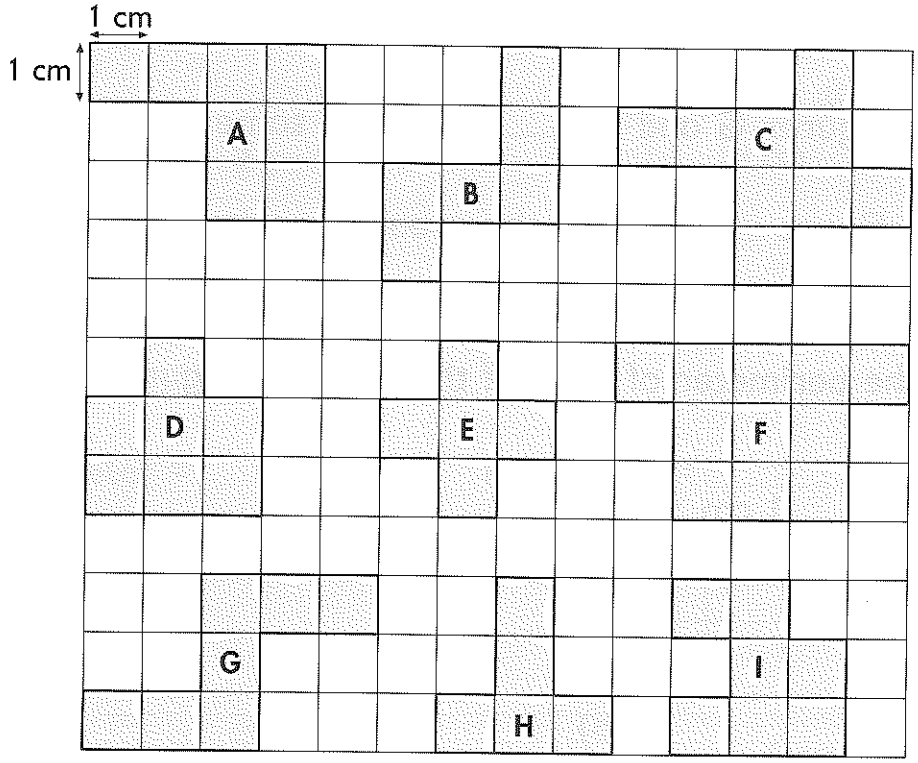
(f) Figures D and _____ have the same area.

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Name: _____ Class: _____ Date: _____

Exercise 2 : Perimeter

1. What is the perimeter of each of the following figures?



(a) Complete the following table.

Figure	Perimeter
A	cm
B	cm
C	cm
D	cm
E	cm
F	cm
G	cm
H	cm
I	cm

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(b) Figures D, _____ and _____ have the same perimeter.

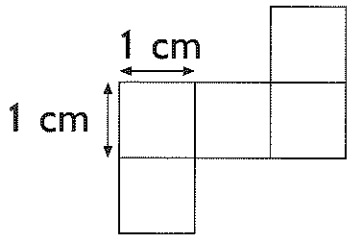
(c) Figures A, _____ and _____ have the same perimeter.

(d) Figures G and _____ have the same perimeter.

(e) Figure _____ has the greatest perimeter.

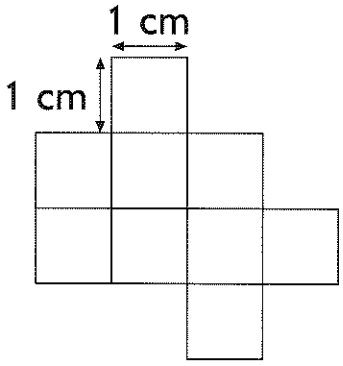
2. Find the perimeter of each of the following figures.

(a)



The perimeter is _____ cm.

(b)

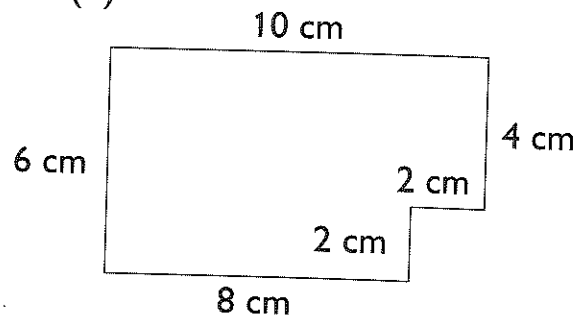


The perimeter is _____ cm.

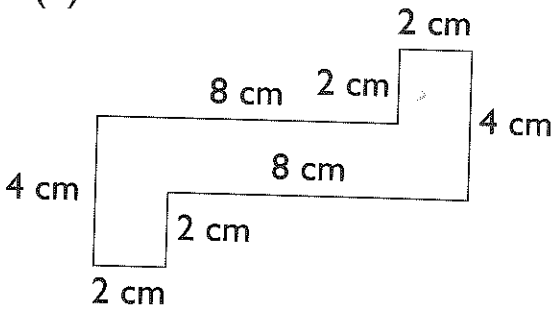
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3. Find the perimeter of each of the following figures.

(a)



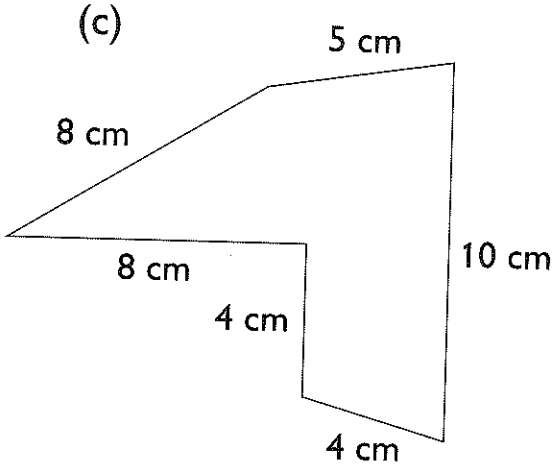
(b)



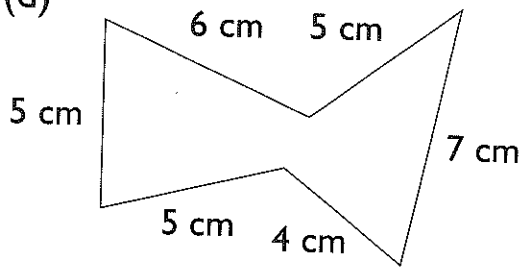
Perimeter = _____ cm

Perimeter = _____ cm

(c)



(d)

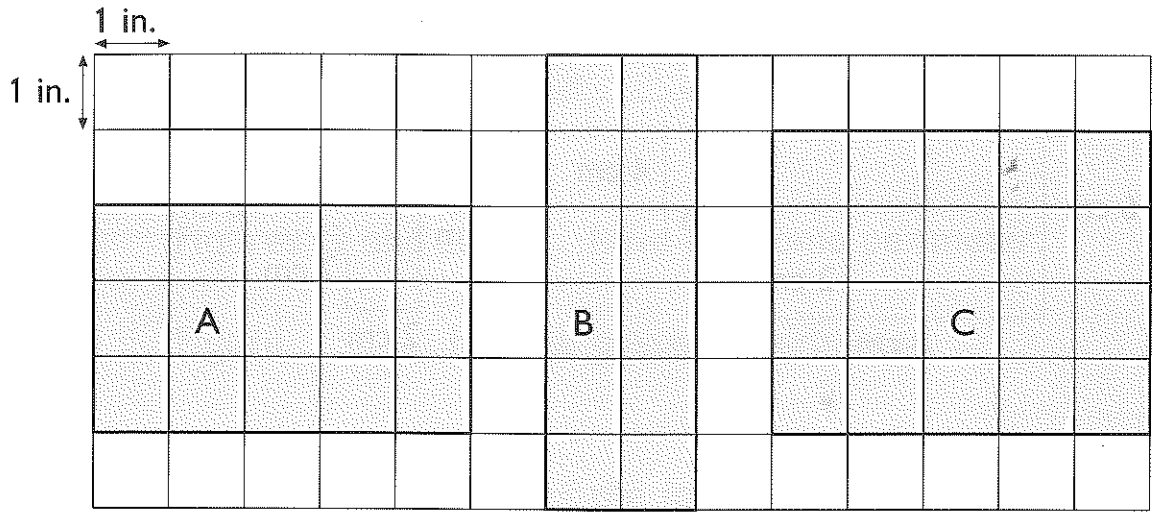


Perimeter = _____ cm

Perimeter = _____ cm

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4. (a) Complete the table below.



Rectangle	Perimeter	Area
A	in.	square inches
B	in.	square inches
C	in.	square inches

(b) Rectangles _____ and _____ have the same perimeter but different area.

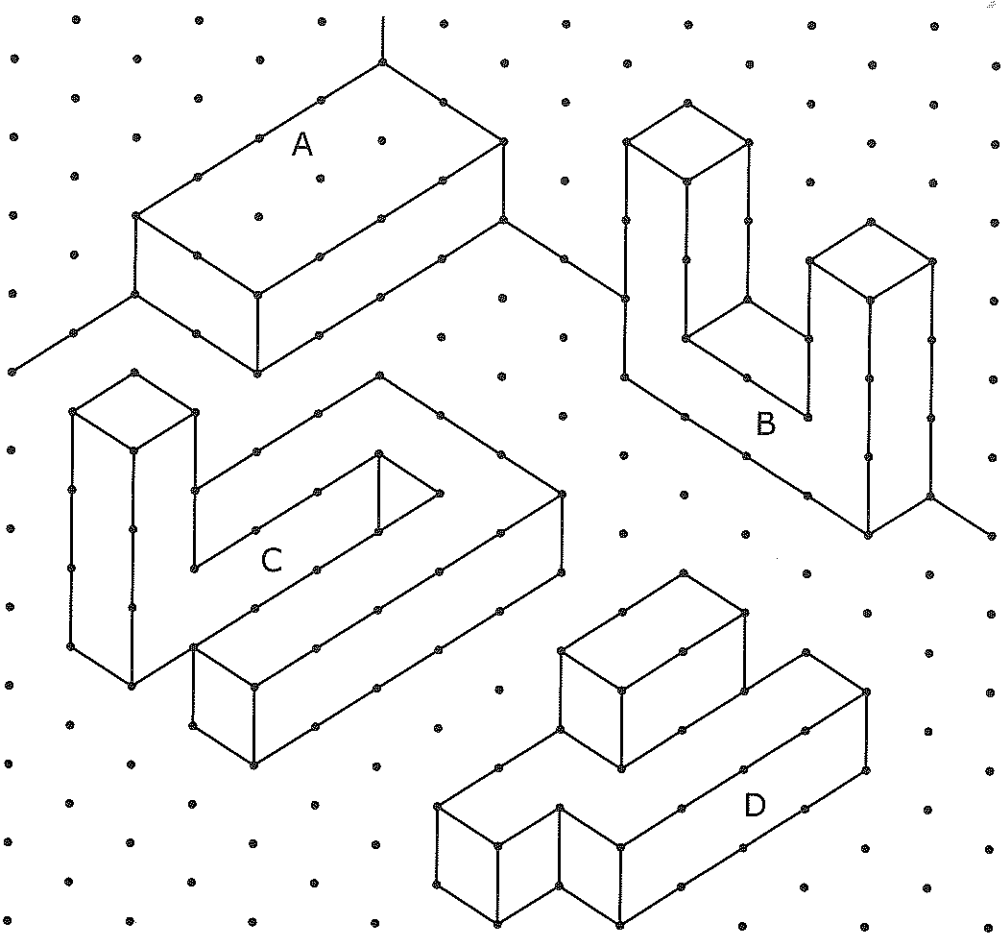
(c) Rectangle _____ has the greatest perimeter.

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Name: _____ Class: _____ Date: _____

Exercise 3 : Volume

1. How many unit cubes are needed to build each of the following solids?



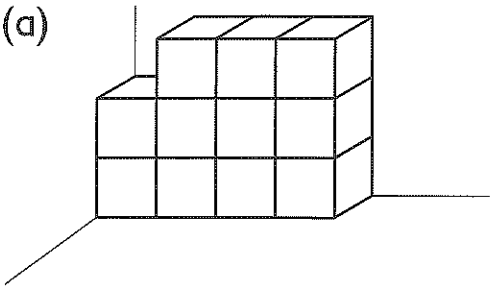
Complete the following table.

Solid	Number of unit cubes
A	
B	
C	
D	

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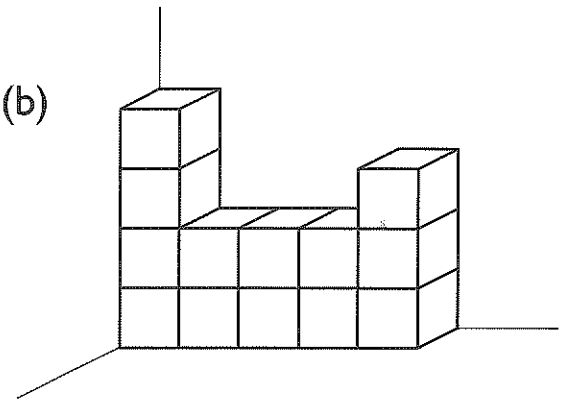
2. Find the volume of each solid.

(a)



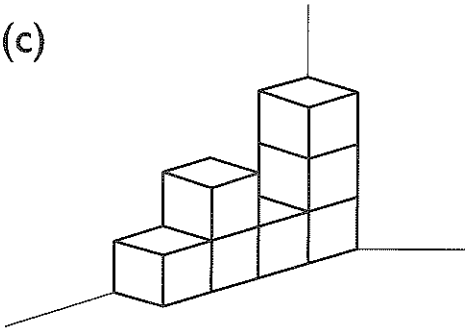
_____ cubic units

(b)



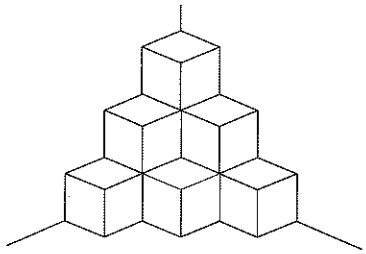
_____ cubic units

(c)



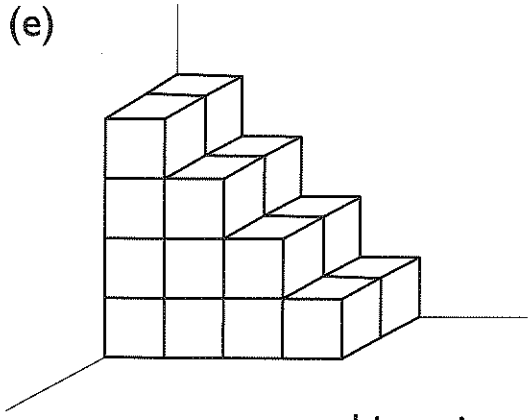
_____ cubic units

(d)



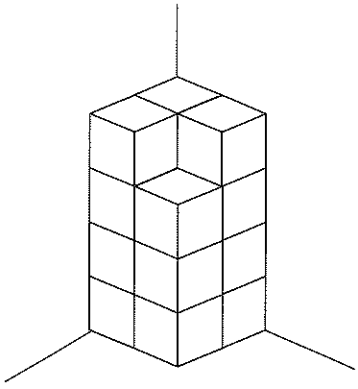
_____ cubic units

(e)



_____ cubic units

(f)



_____ cubic units

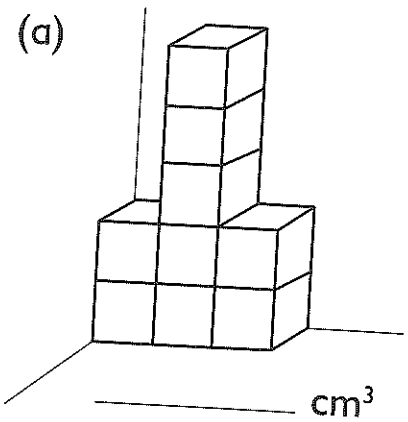
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(g) Which solid has the greatest volume? _____

(h) Which solid has the smallest volume? _____

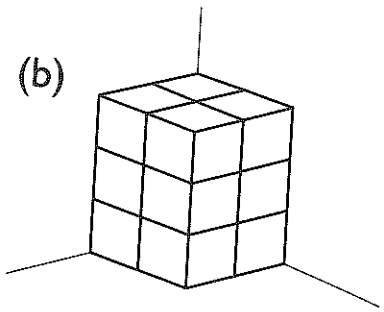
3. The following solids are made up of 1-cm cubes. Find the volume of each solid.

(a)



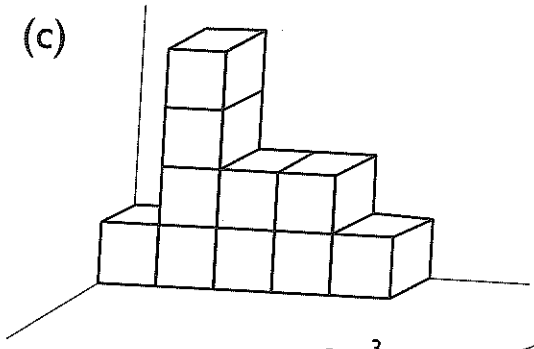
_____ cm^3

(b)



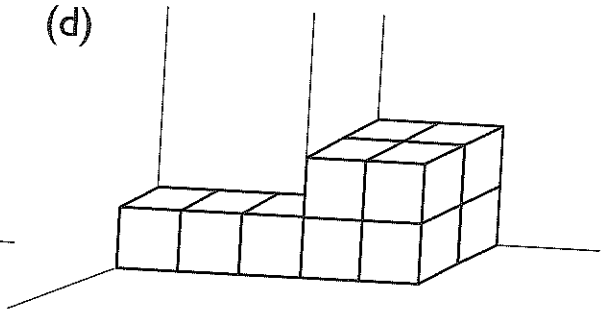
_____ cm^3

(c)



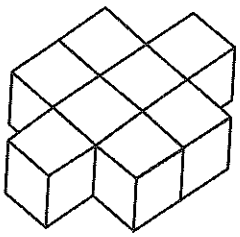
_____ cm^3

(d)



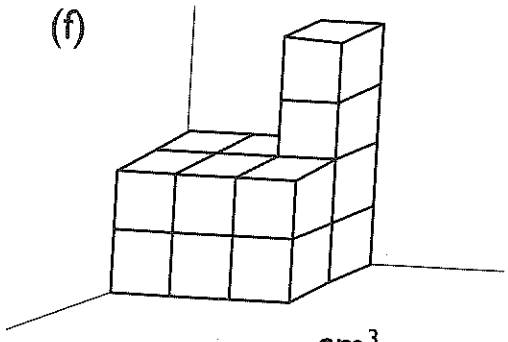
_____ cm^3

(e)



_____ cm^3

(f)

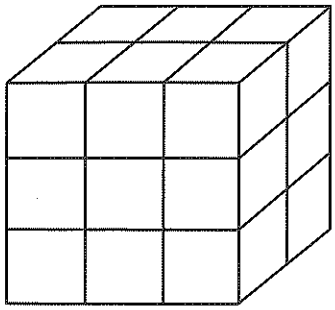


_____ cm^3

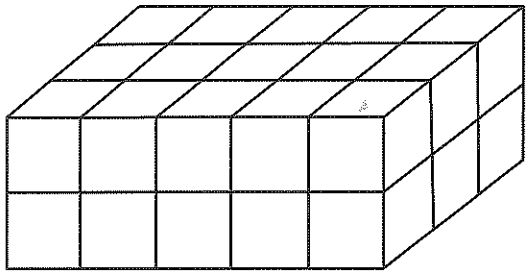
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4. The solids are made up of 1-cm cubes.
Complete the table below the solids.

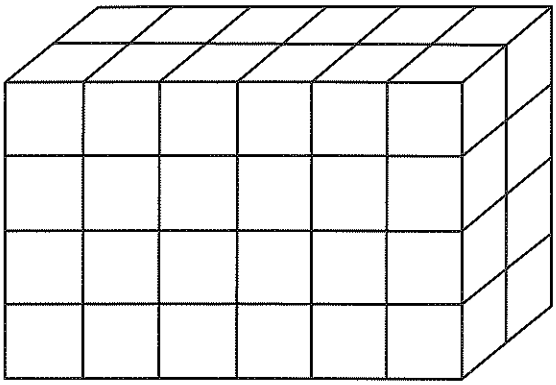
(a)



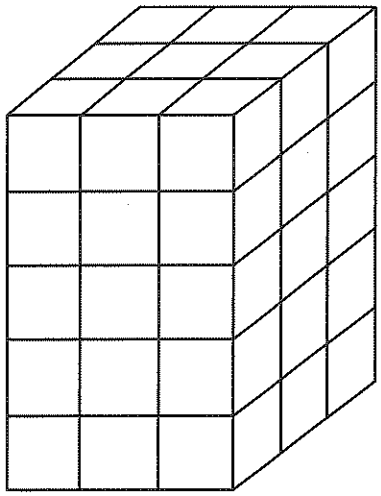
(b)



(c)



(d)



Solid	Length (cm)	Width (cm)	Height (cm)	Volume (cm^3)
A				
B				
C				
D				

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ANSWERS

Unit 1 Numbers to 10,000

Exercise 1A

1. (a) 3104 (b) 7035
2. (a) 204 (b) 3711 (c) 4009 (d) 1500
   (e) 5243
3. (a) Five hundred twenty
   (b) Three thousand, eight hundred five
   (c) Five thousand, one
   (d) Six thousand, forty-three
   (e) Seven thousand, two hundred ninety
   (f) Nine thousand, eighteen
4. (a) 200 (b) 70 (c) 1 (d) 4000
   (e) 40 (f) 800

Exercise 1B

1. (a) 4, 3, 1, 5 (b) 4000
   (c) hundreds, 300 (d) 1, 10
   (e) 5, 5
2. (a) 8, 60, 700, 1000 (b) 8, 90, 600, 2000
   (c) 2, 50, 700, 3000 (d) 4, 10, 600, 9000
3. (a) 3000 (b) 3 (c) 300 (d) 30

Exercise 1C

1. (a) 2186 (b) 8137 (c) 6857 (d) 2382
2. (a) 5781 (b) 6624 (c) 8017 (d) 9532
3. (a) < (b) < (c) > (d) >
4. (a) 4009, 4067, 4135, 4302
   (b) 6531, 6513, 6351, 6315

Exercise 2

1. (a) 1039 (b) 1816 (c) 3590 (d) 4992
   (e) 8074 (f) 8001
2. (a) 1 (b) 10 (c) 100 (d) 1000
3. (a) 7660 (b) 7669 (c) 7759 (d) 8659
4. (a) 4040 (b) 4310 (c) 7010 (d) 4013
5. (a) 9250 (b) 9223 (c) 6253 (d) 8953
6. (a) 6255, 6355 (b) 6361, 7361
   (c) 2399, 2369 (d) 68, 3068
   (e) 8652, 5652 (f) 3726, 3426

Exercise 3

1. (a) 110; 110, 100; 110
   (b) 110, 120; 120
2. 5700; 5600, 5700; 5600
3. (a) 320 (b) 470 (c) 600
   (d) 1020 (e) 3620 (f) 4760
4. (a) 1600 (b) 9100 (c) 3100
   (d) 2300 (e) 7600 (f) 5600
5. (a) 6000 (b) 9000 (c) 5000
   (d) 9000 (e) 4000 (f) 3000

Unit 2 Addition and Subtraction

Exercise 1A

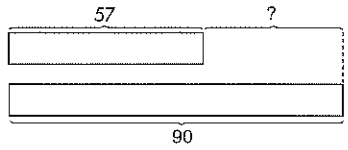
1. (a) 33 (b) 41 (c) 53 (d) 63 (e) 77
2. (a) 37, 45, 45 (b) 46, 55, 55
   (c) 88, 94, 94
3. (a) 87 (b) 77 (c) 58

Exercise 1B

1. (a) 24 (b) 38 (c) 49 (d) 68 (e) 77
2. (a) 12, 6, 6 (b) 37, 28, 28
   (c) 41, 34, 34
3. (a) 14 (b) 56 (c) 15

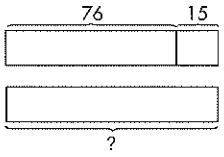
Exercise 1C

1. (a) 74 (b) 14 (c) 39 (d) 18
2. (a) 47 (b) 61 (c) 77 (d) 91
3. (a) 5 (b) 50 (c) 40 (d) 10
4. (a)



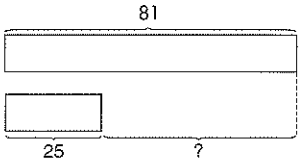
90 − 57 = 33

(b)



76 + 15 = 91

(c)



81 − 25 = 56

5. (a) 58 (b) 56 (c) 95
6. (a) − (b) + (c) − (d) −
7. (a) > (b) > (c) < (d) =
   (e) > (f) =

Exercise 2A

1. (a) 538 (b) 703 (c) 530
   (d) 726 (e) 77 (f) 467
2. (a) 660 (b) 794 (c) 649
   (d) 702
3. (a) 60, 80, 140 (b) 60, 90, 150
   (c) 670, 200, 870 (d) 90, 80, 10
   (e) 90, 30, 60 (f) 260, 140, 120
4. (a) 600, 300, 900 (b) 700, 200, 900
   (c) 700, 200, 900 (d) 1000, 600, 400
   (e) 800, 700, 100 (f) 800, 400, 400
5. (a) 27 (b) 83 (c) 18
   (d) 61 (e) 28
6. (a) 188 (b) 600 (c) 435 (d) 430 (e) 350

Exercise 2B

1. (a) 251 (b) 62 (c) 858 (d) 211

Exercise 3

1. (a) 3080 (b) 2007 (c) 3705
   (d) 5025 (e) 8038 (f) 9000
2. (a) 1352 (b) 3352 (c) 1527
   (d) 5527 (e) 9816
3. (a) 1333 (b) 2519 (c) 1880
   (d) 1814 (e) 2523 (f) 3319
   (g) 5141 (h) 4800 (i) 7013
   (j) 8332 (k) 6566 (l) 4733
   (m) 10,000 (n) 9302 (o) 9302

Exercise 4

1. (a) 1902 (b) 2680 (c) 4570
   (d) 4400 (e) 7300 (f) 8600
2. (a) 907 (b) 639 (c) 718
   (d) 395 (e) 279
3. (a) 1364 (b) 817 (c) 1908
   (d) 2124 (e) 2321 (f) 2678
   (g) 1946 (h) 1556 (i) 803
   (j) 2997 (k) 4997 (l) 169
   (m) 3946 (n) 4 (o) 6234

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Exercise 5

1. (a) $3058 (b) 19 (c) 4076 (d) $798

Unit 3 Multiplication and Division

Exercise 1

1. 12
2. 5 × 4 = 20, 4 × 5 = 20
3. 7, 2
4. 24, 24, 8, 3
5. (a) 10 (b) 18 (c) 36 (d) 0
6. (a) 8 (b) 9 (c) 6 (d) 8
7. (a) 9, 9 (b) 7, 7

Exercise 2

1. (a) 45 (b) 8 m (c) 10
   (d) 9 (e) 6 lb (f) 24

Exercise 3

1. (a) 18, 180 (b) 16, 160
   (c) 30, 3000 (d) 28, 2800
2. (a) 120 (b) 100 (c) 1200 (d) 1000
   (e) 219 (f) 46 (g) 355 (h) 244
3. (a) 272 (b) 1095 (c) 1044 (d) 2500
   (e) 1590 (f) 2871 (g) 4848 (h) 6262
   (i) 9220 (j) 9492 (k) 6430 (l) 9560
4. (a) 189 (b) 320 (c) 288 (d) 178
   (e) 828 (f) 1167 (g) 2115 (h) 4250
5. (a) 692 (b) 625 (c) 189
   (d) (i) 4000 (ii) 4272
   (e) (i) $9000 (ii) $9375

Exercise 4

1. 25, 37, 281, 403, 2649
2. 18, 46, 318, 360, 4816
3. (a) 34, 0 (b) 15, 1
4. (a) 11, 2 (b) 22, $1

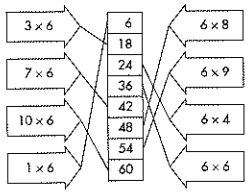
Exercise 5

1. (a) 8 (b) 12 (c) 37 R 8 (d) 50 R 3
2. (a) 231, 2 (b) 213, 2 (c) 121, 4 (d) 428, 1
3. (a) 8 R 3 (b) 17 (c) 35 R 1
   (d) 19 R 4 (e) 27 (f) 5 R 4
   (g) 103 (h) 265 (i) 105
   (j) 183 R 3 (k) 240 R 2 (l) 24
4. (a) 36 (b) 21 (c) 45, 5
   (d) 114, 4

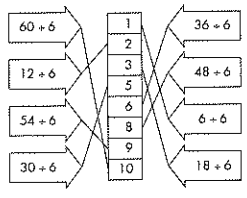
Unit 4 Multiplying and Dividing by 6, 7, 8 and 9

Exercise 1

1.



2.

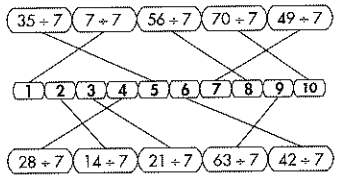


3. (a) 126 (b) 204 (c) 270
   (d) 1548 (e) 2220 (f) 2592
   (g) 3030 (h) 3600 (i) 4278
   (j) 4620 (k) 5436 (l) 5724
4. (a) 8 R 1 (b) 11 R 2 (c) 12
   (d) 13 (e) 14 (f) 16
   (g) 43 (h) 50 (i) 65
   (j) 83 R 2 (k) 92 (l) 89 R 3
5. (a) 45, 4 (b) $4392 (c) $150

Exercise 2

1. (a) 7 (b) 14 (c) 21 (d) 28 (e) 35
   (f) 42 (g) 49 (h) 56 (i) 63 (j) 70

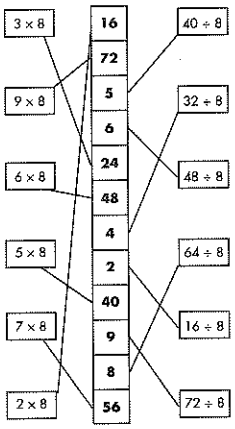
2.



3. (a) 140 (b) 469 (c) 553 (d) 658
   (e) 1421 (f) 2492 (g) 3500 (h) 4298
   (i) 5943
4. (a) 7 R 4 (b) 9 R 1 (c) 10 R 2 (d) 11
   (e) 36 (f) 40
   (g) 59 (h) 100 R 5 (i) 104
   (j) 121 (k) 125 (l) 137 R 1
5. (a) 15 (b) 623 (c) $576

Exercise 3

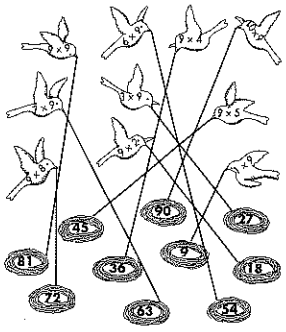
1.



2. (a) 104 (b) 192 (c) 280 (d) 336
   (e) 544 (f) 632 (g) 832 (h) 1728
   (i) 2864 (j) 2960 (k) 3368 (l) 4872
3. (a) 4 R 5 (b) 8 (c) 9 R 3 (d) 11
   (e) 11 R 6 (f) 12 R 2 (g) 13 R 2 (h) 25
   (i) 47 (j) 63 R 4 (k) 83 R 6 (l) 94
4. (a) 96 (b) 224 (c) 75

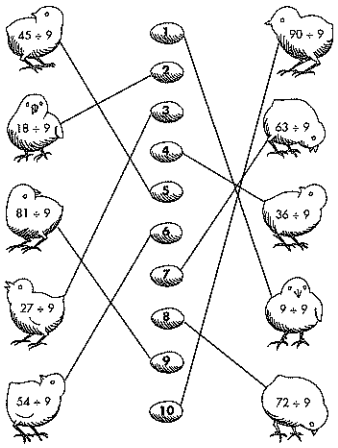
Exercise 4

1.



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2.



3. (a) 495 (b) 540 (c) 648
   (d) 5130 (e) 6624 (f) 7443
4. (a) 8 R 4 (b) 9 R 2 (c) 10
   (d) 61 R 1 (e) 78 (f) 92
5. (a) $55 (b) $945 (c) 30

Exercise 5

1. (a) 1600 (b) 1750
2. (a) 8 (b) 3 (c) 40 (d) 90 (e) 7
3. (a) 3, 30, 300, 3000 (b) 2, 20, 200, 2000
4. (a) 450, 90, 90 (b) 1800, 300, 300
   (c) 2400, 600, 600, 645, close

Unit 5 Data Analysis

Exercise 1

1. (a)

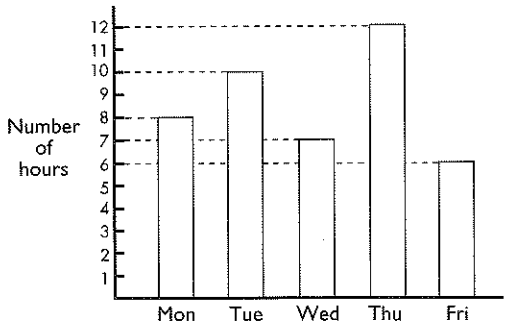
	Number of boys	Number of girls	Total number of boys and girls
Wearing caps	22	36	58
Not wearing caps	34	12	46
Total number of boys and girls	56	48	104

   (b) 22 (c) 14

2. (a)

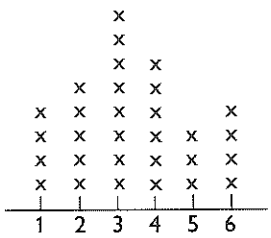
Subject \ Name	Raju	Steve	Maggie
English	79	68	70
Mathematics	80	72	75
Science	85	80	87

   (b) Raju (c) Steve (d) Maggie
   (e) 5 (f) 5
3. (a) Swimming (b) Playing piano (c) 6
   (d) 42
4.



Exercise 2

1. (a)



   (b) impossible
2. (a) No (b) No (c) yellow (d) yellow

Unit 6 Length

Exercise 1

1. (a) 400 (b) 600 (c) 3
   (d) 9 (e) 110 (f) 531
   (g) 7 m 23 cm (h) 52 (i) 75
2. (a) 700 (b) 5 (c) 80
   (d) 38 (e) 2 (f) 3
3. (a) 5 m 65 cm (b) 4 m 7 cm (c) 8 m 4 cm
   (d) 6 m 10 cm (e) 5 m 0 cm
4. (a) 2 m 17 cm (b) 0 m 99 cm
   (c) 3 m 27 cm (d) 2 m 90 cm
   (e) 1 m 80 cm

Exercise 2

1. (a) 3000 (b) 10,000 (c) 2
   (d) 5 (e) 1305 (f) 6 km 7 m
2. (a) 1 km 700 m (b) 4 km 0 m
   (c) 1 km 220 m (d) 2 km 108 m
3. (a) 650 (b) 250 (c) 1
   (d) 360 (e) 970
4. (a) 3 km 330 m (b) 60
   (c) 1 km 370 m (d) 1 km 100 m

Exercise 3

1. (a) 15 (b) 263 (c) 925
   (d) 108 (e) 82 (f) 117
   (g) 12 yd 0 ft (h) 36 yd 2 ft (i) 3 ft 1 in.
   (j) 2 ft 0 in.
2. (a) 6 (b) 13 (c) 7
   (d) 1 (e) 19 (f) 24
   (g) 13 (h) 0 ft 11 in.
3. (a) 6 yd 0 ft (b) 8 yd 1 ft (c) 10 yd 0 ft
   (d) 12 ft 11 in. (e) 7 ft 0 in. (f) 9 ft 3 in.
   (g) 3 ft 3 in.
4. (a) 2 yd 1 ft (b) 6 yd 2 ft (c) 0 yd 2 ft
   (d) 10 ft 4 in. (e) 4 ft 9 in. (f) 0 ft 10 in.
   (g) 0 ft 6 in.
5. (a) 2 (b) 20 (c) 10 (d) 3

Exercise 4

1. (a) 5280 (b) 2640 (c) 1320
   (d) 1760 (e) 880 (f) 440
2. (a) 28 (b) 43 (c) 4

Unit 7 Weight

Exercise 1

1. (a) 0 kg 700 g (b) 1 kg 0 g (c) 1 kg 600 g
   (d) 1 kg 200 g (e) 1 kg 100 g (f) 3 kg 200 g
2. (a) 1 kg 25 g (b) 2 kg 100 g (c) 5 kg 7 g
   (d) 8 kg 50 g
3. (a) 1300 (b) 3080 (c) 4009
   (d) 5125 (e) 6010 (f) 7001
4. (a) 370 (b) 50 (c) 1
   (d) 730 (e) 460 (f) 1
   (g) 995

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5. (a) A (b) B (c) B
(d) 2 kg 850 g (e) 10 (f) A, B
6. (a) (i) 380 g (ii) 130 g (iii) 120
(b) (i) 3 kg (ii) 1 kg (iii) $4

Exercise 2

1. (a) 2 kg 700 g (b) 45 kg 100 g
(c) 540 g (d) 3 kg 430 g, 9 kg 30 g
(e) 560 g

Exercise 3

1. (a) 1 lb 2 oz (b) 1 lb 9 oz (c) 1 lb 0 oz
2. (a) 64 (b) 37 (c) 106
(d) 60 (e) 94 (f) 150
3. (a) 14 (b) 12 (c) 3
(d) 12 (e) 75 (f) 2
4. (a) C (b) 19 (c) B
(d) 12 (e) A, C (f) 2 lb 14 oz

Unit 8 Capacity

Exercise 1

1. (a) 65 (b) 250 (c) 150
(d) 700 (e) 300 (f) 900
2. (a) 5 ℓ 600 ml (b) 5 ℓ 600 ml
(c) 11 ℓ 200 ml (d) 9 ℓ 200 ml
3. (a) 1005 (b) 1200 (c) 2015 (d) 3525
4. (a) 1 ℓ 600 ml (b) 2 ℓ 895 ml (c) 3 ℓ 5 ml
(d) 3 ℓ 70 ml
5. (a) 1 ℓ 650 ml (b) 3 ℓ 900 ml
(c) 7 ℓ 715 ml (d) 5 ℓ 430 ml
(e) 7 ℓ 372 ml (f) 2 ℓ 900 ml
(g) 2 ℓ 770 ml (h) 3 ℓ 110 ml
(i) 2 ℓ 853 ml
6. (a) 1900 ml or 1 ℓ 900 ml
(b) 3085 ml
(c) 1 ℓ 450 ml or 1450 ml

Exercise 2

1. (a) 38 (b) 47
2. (a) 16 (b) 21
3. (a) 48 (b) 135
4. (a) 6 (b) 12
5. (a) 14 qt 0 pt (b) 5 gal 0 qt
(c) 8 pt 0 c (d) 451 pt 1 c
(e) 5 gal 3 qt (f) 3 qt 1 pt
6. (a) 2 qt 3c (b) 1 qt 1 c
(c) 4 qt 3 c
7. (a) 4 gal 2 qt (b) 2 gal 2 c
(c) 1 gal 6 pt

Unit 9 Money

Exercise 1

1. (a) $16.55 (b) $22.41 (c) $70.75 (d) $55.12
2. (a) $2.95 (b) $10.20 (c) $14.15 (d) $23.60
(e) $30.75 (f) $94.15 (g) $512.05 (h) $4040
3. (a) Five dollars fifty cents
(b) Ten dollars ten cents
(c) Fifty-seven dollars seventy-five cents
(d) Eighty-three dollars forty cents
(e) Two hundred sixty-one dollars
(f) Four thousand, five hundred sixty-seven dollars

Exercise 2

1. (a) $9.75, $10.40 (b) $11.45, $11.60
(c) $39.05, $39.90 (d) $83.75, $84.30
2. (a) $6 (b) $9 (c) $10 (d) $14
(e) $18 (f) $15 (g) $13.39 (h) $17.49
(i) $45.10 (j) $39.65
3. (a) $8.05 (b) $12.10 (c) $30
(d) $71.40 (e) $42.70 (f) $43.75
4. (a) $50.50, $4.25, $54.75
(b) $12.99, $2.35, $15.34
(c) $5.45, $27.85, $33.30
(d) $11.20, $15.60, $26.80
(e) $4.25, $50.50, $11.20, $65.95
(f) $27.85, $12.99, $15.60, $56.44
5. (a) $8.80 (b) $8.20 (c) $54.50
(d) $9.75 (e) $35.51 (f) $12.30

Exercise 3

1. (a) $2.25, $2.05 (b) $3.10, $2.20
(c) $16, $15.70 (d) $15.05, $14.10
2. (a) $2.50 (b) $1.70 (c) $16.60
(d) $22.25 (e) $64.75 (f) $26.20
(g) $15.90 (h) $29.45 (i) $17.20
(j) $18.06
3. (a) $2.40 (b) $1.05 (c) $1.30
(d) $3.65 (e) $22.15 (f) $2.55
4. (a) $6.20 (b) $8.85 (c) $7.65
(d) $1.95 (e) $13.27

Exercise 4

1. (a) 750¢ or $7.50 (b) 1120¢ or $11.20
(c) $36 (d) $201.60
2. (a) 40¢ (b) 600¢ or $6
(c) $1.20 (d) $5.02
3. (a) $64.80 (b) $8.60

Unit 10 Fractions

Exercise 1A

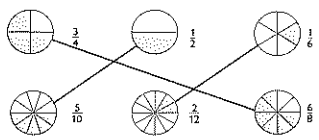
1. (a) $\frac{3}{5}$ (b) $\frac{2}{3}$ (c) $\frac{7}{9}$
(d) $\frac{1}{4}$ (e) $\frac{3}{8}$ (f) $\frac{5}{6}$
2. (a) Any 3 parts shaded (b) Any 2 parts shaded
(c) Any 1 part shaded (d) Any 7 parts shaded
3. (a) $\frac{2}{5}$ (b) $\frac{1}{3}$ (c) $\frac{7}{8}$ (d) $\frac{3}{6}$ or $\frac{1}{2}$
(e) $\frac{3}{10}$ (f) $\frac{4}{7}$ (g) $\frac{3}{8}$ (h) $\frac{6}{7}$
(i) $\frac{7}{12}$ (j) $\frac{5}{12}$

Exercise 1B

1. (a) $\frac{7}{9}$ (b) $\frac{3}{8}$ (c) $\frac{3}{4}$ (d) $\frac{2}{3}$
2. (a) $\frac{1}{3}$ (b) $\frac{6}{8}$ (c) $\frac{1}{8}$ (d) $\frac{1}{4}$
3. (a) $\frac{1}{3}$ (b) $\frac{7}{8}$ (c) $\frac{3}{5}$ (d) $\frac{1}{8}$
(e) $\frac{5}{6}$ (f) $\frac{10}{12}$ (g) $\frac{6}{7}$ (h) $\frac{8}{9}$
4. (a) $\frac{1}{4}$ (b) $\frac{1}{9}$ (c) $\frac{2}{8}$ (d) $\frac{5}{12}$
(e) $\frac{2}{5}$ (f) $\frac{6}{10}$ (g) $\frac{3}{6}$ (h) $\frac{1}{4}$
5. (a) $\frac{1}{5}, \frac{1}{6}, \frac{1}{7}$ (b) $\frac{4}{5}, \frac{4}{7}, \frac{4}{12}$
(c) $1, \frac{2}{3}, \frac{1}{3}$ (d) $\frac{7}{8}, \frac{5}{8}, \frac{1}{8}$
(e) $\frac{3}{4}, \frac{3}{5}, \frac{3}{7}$
6. (a) $\frac{1}{7}, \frac{1}{5}, 1$ (b) $\frac{5}{9}, \frac{5}{7}, \frac{5}{6}$
(c) $\frac{2}{5}, \frac{3}{5}, \frac{4}{5}$ (d) $\frac{5}{12}, \frac{9}{12}, \frac{10}{12}$
(e) $\frac{2}{9}, \frac{2}{7}, \frac{2}{3}$

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Exercise 2

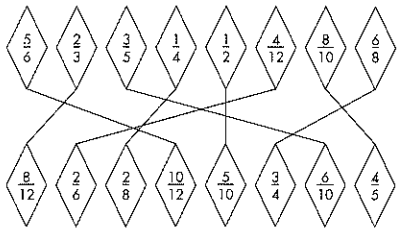
1. 

2. (a) 3 (b) 8 (c) 1
   (d) 1 (e) 4 (f) 10

3. (a) $\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$
   (b) $\frac{2}{3} = \frac{4}{6} = \frac{8}{12}$

4. (a) $\frac{9}{12}$ (b) $\frac{10}{12}$ (c) $\frac{8}{12}$ (d) $\frac{5}{10}$
   (e) $\frac{3}{4}$ (f) $\frac{1}{3}$ (g) $\frac{1}{2}$ (h) $\frac{1}{3}$

5. (a) $\frac{6}{9}$ (b) $\frac{1}{4}$

6. 

7. (a) $\frac{1}{2}$ (b) $\frac{2}{3}$ (c) $\frac{4}{5}$

Exercise 3

1. (a) $\frac{5}{8}$ (b) $\frac{6}{9}$ or $\frac{2}{3}$ (c) $\frac{6}{7}$
   (d) $\frac{9}{10}$ (e) $\frac{8}{12}$ or $\frac{2}{3}$ (f) $\frac{10}{11}$

2. (a) $\frac{5}{6}$ (b) $\frac{7}{9}$

Exercise 4

1. (a) $\frac{5}{9}$ (b) $\frac{5}{12}$ (c) $\frac{5}{10}$ or $\frac{1}{2}$
   (d) $\frac{3}{8}$ (e) $\frac{1}{4}$ (f) $\frac{4}{7}$

2. (a) $\frac{3}{12}$ yd or $\frac{1}{4}$ yd (b) $\frac{6}{10}$ kg or $\frac{3}{5}$ kg

Exercise 5

1. (a) $\frac{1}{3}$ (b) $\frac{1}{7}$

2. (a) 6 (b) 24 (c) 45
   (d) 18 (e) 84 (f) 100

Exercise 6

1. (a) $\frac{8}{10}$ or $\frac{4}{5}$ (b) $\frac{6}{10}$ or $\frac{3}{5}$ (c) $\frac{3}{4}$

2. (a) $\frac{1}{4}$ (b) $\frac{1}{2}$

3. (a) $\frac{35}{100}$ or $\frac{7}{20}$ (b) $\frac{80}{100}$ or $\frac{4}{5}$

4. (a) $\frac{2}{10}$ or $\frac{1}{5}$ (b) $\frac{2}{10}$ or $\frac{1}{5}$

Unit 11 Time

Exercise 1A

1. (a) 10, 4, 10, 4 (b) 20, 8, 20, 8
   (c) 25, 11, 25, 11 (d) 20, 1, 20, 1
2. (a) 7:58 (b) 12:29 (c) 10:13
   (d) 2:18 (e) 9:43 (f) 6:37
3. (a) 2:30 a.m (b) 8:20 p.m. (c) 4:15 p.m.
   (d) 4:15 a.m. (e) 2:00 p.m. (f) 1:50 p.m.
4. (a) 3:40, 15, 3:55
   (b) 10:00, 2, 12:00
   (c) 5:45, 1 h 40 min, 7:25
   (d) 12:05, 4 h 25 min, 4:30
   (e) 8:25, 1 h 30 min, 9:55
5. (a) 9:05 a.m. (b) 10:20 p.m. (c) 5:10 p.m.
   (d) 8:45 p.m. (e) 12:10 a.m.

Exercise 1B

1. (a) 7:20 p.m. (b) 7 h 30 min (c) 8 h
2. (a) 65 (b) 155 (c) 3 h 15 min
   (d) 1 h 30 min
3. (a) 100 (b) 175 (c) 205
   (d) 245 (e) 1 h 35 min (f) 1 h 50 min
   (g) 2 h 15 min (h) 4 h 45 min
4. (a) 1 h 35 min (b) 2 h 50 min (c) 2 h 35 min
   (d) 5 h 5 min (e) 5 h 0 min
5. (a) 1 h 20 min (b) 1 h 50 min (c) 1 h 40 min
   (d) 1 h 25 min (e) 1 h 55 min
6. (a) 10:45 a.m. (b) 3 h 15 min
   (c) Mrs. Ray, 20 min shorter
   (d) 2 h 50 min

Exercise 2

1. (a) 8 (b) 19
2. (a) 205 (b) 3 min 20 s
3. (a) 85 (b) 155
   (c) 190 (d) 1 min 55 s
   (e) 2 min 45 s (f) 4 min 0 s
4. (a) 28 months (b) 22 months
   (c) 33 months (d) 37 months
5. (a) 35 (b) 2 years 4 months
6. (a) 24 days (b) 15 days
   (c) 11 days (d) 26 days
9. (a) 20 (b) 3 weeks 1 day

Unit 12 Geometry

Exercise 1

1.

	Figure	Number of sides	Number of angles
(a)	A	4	4
(b)	B	5	5
(c)	C	5	5
(d)	D	6	6
(e)	E	3	3
(f)	F	9	9

2. (d) only
3. (a) 4, 4 (b) 8, 8

Exercise 2

1.

Figure	Number of sides	Number of angles	Number of right angles
A	4	4	2
B	4	4	4
C	3	3	1
D	4	4	4
E	4	4	1
F	4	4	2
G	5	5	3
H	3	3	1

2. D and E

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Exercise 3

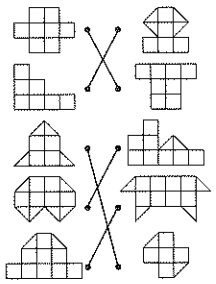
1. (b) only
2. A, B, F
3. (a) isosceles (b) equilateral (c) scalene
4. (a) right-angled isosceles (b) right-angled scalene

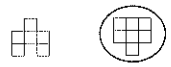
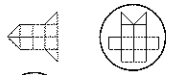
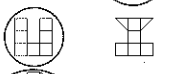
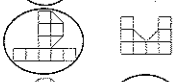
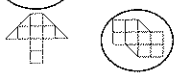
Exercise 4

1. (a) cylinder (b) triangular prism
   (c) rectangular pyramid (d) sphere
2. (a) 0 (b) 6, 12, 8
   (c) 5, 8, 5
3. sphere, cone

Unit 13 Area, Perimeter and Volume

Exercise 1

1. 

2. (a) 
   (b) 
   (c) 
   (d) 
   (e) 

3. (a) 9 (b) 6 (c) 10
   (d) 8 (e) 9 (f) 10
4. (a) 9 (b) 7 (c) 7
   (d) 6 (e) 8 (f) 8
5. (a)

Figure	Area
A	8 cm²
B	6 cm²
C	9 cm²
D	5 cm²
E	7 cm²
F	9 cm²
G	5 cm²
H	4 cm²
I	8 cm²

   (b) C, F (c) H (d) I
   (e) F (f) G

Exercise 2

1. (a)

Figure	Perimeter
A	14 cm
B	14 cm
C	18 cm
D	12 cm
E	12 cm
F	16 cm
G	16 cm
H	12 cm
I	14 cm

   (b) E, H (c) B, I (d) F (e) C
2. (a) 12 (b) 16
3. (a) 32 (b) 32 (c) 39 (d) 32
4. (a)

Rectangle	Perimeter	Area
A	16 in.	15 square inches
B	16 in.	12 square inches
C	18 in.	20 square inches

   (b) A, B (c) C

Exercise 3

1.

Solid	Number of of unit cubes
A	8
B	8
C	13
D	10

2. (a) 11 (b) 13 (c) 7
   (d) 10 (e) 20 (f) 15
   (g) E (h) C
3. (a) 9 (b) 12 (c) 10
   (d) 11 (e) 8 (f) 14

4.

Solid	Length (cm)	Width (cm)	Height (cm)	Volume (cm³)
A	3	2	3	18
B	5	3	2	30
C	6	2	4	48
D	3	3	5	45

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