

Summer Packet

Mathematics

Mr. Pawlowski

Resource Teacher

**Check What You Know****Multiplying and Dividing Whole Numbers**

Multiply.

$$\begin{array}{r} \text{a} \\ 1. \quad 49 \\ \times 35 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \\ 380 \\ \times 22 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \\ 816 \\ \times 32 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \\ 276 \\ \times 80 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 2714 \\ \times 52 \\ \hline \end{array}$$

$$\begin{array}{r} 5216 \\ \times 16 \\ \hline \end{array}$$

$$\begin{array}{r} 177 \\ \times 402 \\ \hline \end{array}$$

$$\begin{array}{r} 818 \\ \times 321 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 445 \\ \times 176 \\ \hline \end{array}$$

$$\begin{array}{r} 3420 \\ \times 634 \\ \hline \end{array}$$

$$\begin{array}{r} 5867 \\ \times 382 \\ \hline \end{array}$$

$$\begin{array}{r} 6334 \\ \times 257 \\ \hline \end{array}$$

Divide.

$$\begin{array}{r} \text{a} \\ 4. \quad 3 \overline{)762} \end{array}$$

$$\begin{array}{r} \text{b} \\ 7 \overline{)423} \end{array}$$

$$\begin{array}{r} \text{c} \\ 72 \overline{)216} \end{array}$$

$$\begin{array}{r} \text{d} \\ 33 \overline{)594} \end{array}$$

$$5. \quad 24 \overline{)671}$$

$$63 \overline{)887}$$

$$45 \overline{)6075}$$

$$89 \overline{)3299}$$

$$6. \quad 92 \overline{)8147}$$

$$14 \overline{)3315}$$

$$76 \overline{)2647}$$

$$17 \overline{)8451}$$

**Check What You Know****SHOW YOUR WORK****Multiplying and Dividing Whole Numbers**

Solve each problem.

7. A video game company can fit 535 boxes of games into a truck. If the company has 47 full trucks, how many games does it have total?

The company has _____ games total.

8. Sally bought 1,425 crayons that came in packs of 15. How many packs of crayons did Sally buy?

Sally bought _____ packs.

9. Each day, 1,035 new apps are uploaded to a web server. After 28 days, how many apps would have been uploaded?

_____ apps would have been uploaded.

10. An art museum has 1,042 pictures to split equally into 45 different exhibits. How many more pictures does the museum need to make sure each exhibit has the same amount?

The museum needs _____ more pictures.

11. Robin is making bead necklaces. She wants to use 717 beads to make 57 necklaces. If she wants each necklace to have the same number of beads, how many beads will she have left over?

She will have _____ beads left over.

12. Each day, the gum ball machine in the mall sells 919 gum balls. How many gum balls would it have sold after 160 days?

It would have sold _____ gumballs.

7.

8.

9.

10.

11.

12.

Lesson 1.1 Multiplying 2 and 3 Digits by 2 DigitsMultiply right
to left.

$$\begin{array}{r} 24 \\ \times 7 \\ \hline 168 \end{array}$$

If $24 \times 3 = 72$, then
 $24 \times 30 = 720$.

$$\begin{array}{r} 24 \\ \times 37 \\ \hline 168 \\ + 720 \\ \hline 888 \end{array}$$

$$\begin{array}{r} 24 \\ \times 30 \\ \hline 720 \end{array}$$

Multiply right
to left.

$$\begin{array}{r} 427 \\ \times 1 \\ \hline 427 \end{array}$$

$$\begin{array}{r} 427 \\ \times 61 \\ \hline 427 \\ + 25620 \\ \hline 26047 \end{array}$$

$$\begin{array}{r} 427 \\ \times 60 \\ \hline 25620 \end{array}$$

Multiply.

a

$$\begin{array}{r} 43 \\ \times 42 \\ \hline \end{array}$$

b

$$\begin{array}{r} 75 \\ \times 12 \\ \hline \end{array}$$

c

$$\begin{array}{r} 52 \\ \times 28 \\ \hline \end{array}$$

d

$$\begin{array}{r} 36 \\ \times 91 \\ \hline \end{array}$$

e

$$\begin{array}{r} 16 \\ \times 77 \\ \hline \end{array}$$

f

$$\begin{array}{r} 21 \\ \times 13 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 24 \\ \times 87 \\ \hline \end{array}$$

$$\begin{array}{r} 62 \\ \times 54 \\ \hline \end{array}$$

$$\begin{array}{r} 96 \\ \times 32 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 47 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \\ \times 79 \\ \hline \end{array}$$

$$\begin{array}{r} 45 \\ \times 63 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 26 \\ \times 53 \\ \hline \end{array}$$

$$\begin{array}{r} 39 \\ \times 74 \\ \hline \end{array}$$

$$\begin{array}{r} 44 \\ \times 81 \\ \hline \end{array}$$

$$\begin{array}{r} 473 \\ \times 64 \\ \hline \end{array}$$

$$\begin{array}{r} 856 \\ \times 22 \\ \hline \end{array}$$

$$\begin{array}{r} 375 \\ \times 49 \\ \hline \end{array}$$

4.

$$\begin{array}{r} 838 \\ \times 58 \\ \hline \end{array}$$

$$\begin{array}{r} 266 \\ \times 93 \\ \hline \end{array}$$

$$\begin{array}{r} 372 \\ \times 46 \\ \hline \end{array}$$

$$\begin{array}{r} 659 \\ \times 78 \\ \hline \end{array}$$

$$\begin{array}{r} 428 \\ \times 37 \\ \hline \end{array}$$

$$\begin{array}{r} 235 \\ \times 86 \\ \hline \end{array}$$

5.

$$\begin{array}{r} 907 \\ \times 33 \\ \hline \end{array}$$

$$\begin{array}{r} 415 \\ \times 27 \\ \hline \end{array}$$

$$\begin{array}{r} 364 \\ \times 82 \\ \hline \end{array}$$

$$\begin{array}{r} 547 \\ \times 54 \\ \hline \end{array}$$

$$\begin{array}{r} 739 \\ \times 62 \\ \hline \end{array}$$

$$\begin{array}{r} 697 \\ \times 76 \\ \hline \end{array}$$

Lesson 1.2 Multiplying 4 Digits by 1 and 2 Digits

Multiply from right to left.

$$2 \times 7 = 14 + 2 = 16$$

$$3 \times 7 = 21 + 1 = 22$$

$$\begin{array}{r} 3236 \\ \times 7 \\ \hline 22,652 \end{array}$$

$$6 \times 7 = 42$$

$$3 \times 7 = 21 + 4 = 25$$

$$\begin{array}{r} 7198 \\ \times 14 \\ \hline 28792 \\ + 71980 \\ \hline 100,772 \end{array}$$

$$\begin{array}{r} 7198 \\ \times 4 \\ \hline 28792 \\ 7198 \\ \times 10 \\ \hline 71980 \end{array}$$

If $7,198 \times 1 = 7,198$,
then

$$7,198 \times 10 = 71,980.$$

Multiply.

1. $\begin{array}{r} 2763 \\ \times 5 \\ \hline \end{array}$

b $\begin{array}{r} 6204 \\ \times 7 \\ \hline \end{array}$

c $\begin{array}{r} 3221 \\ \times 4 \\ \hline \end{array}$

d $\begin{array}{r} 8634 \\ \times 8 \\ \hline \end{array}$

e $\begin{array}{r} 7253 \\ \times 6 \\ \hline \end{array}$

2. $\begin{array}{r} 4728 \\ \times 4 \\ \hline \end{array}$

$\begin{array}{r} 3962 \\ \times 9 \\ \hline \end{array}$

$\begin{array}{r} 1854 \\ \times 2 \\ \hline \end{array}$

$\begin{array}{r} 5273 \\ \times 6 \\ \hline \end{array}$

$\begin{array}{r} 4456 \\ \times 3 \\ \hline \end{array}$

3. $\begin{array}{r} 7526 \\ \times 3 \\ \hline \end{array}$

$\begin{array}{r} 9428 \\ \times 2 \\ \hline \end{array}$

$\begin{array}{r} 3725 \\ \times 28 \\ \hline \end{array}$

$\begin{array}{r} 6414 \\ \times 37 \\ \hline \end{array}$

$\begin{array}{r} 2889 \\ \times 41 \\ \hline \end{array}$

4. $\begin{array}{r} 5297 \\ \times 64 \\ \hline \end{array}$

$\begin{array}{r} 4175 \\ \times 23 \\ \hline \end{array}$

$\begin{array}{r} 8052 \\ \times 46 \\ \hline \end{array}$

$\begin{array}{r} 2988 \\ \times 85 \\ \hline \end{array}$

$\begin{array}{r} 6364 \\ \times 92 \\ \hline \end{array}$

5. $\begin{array}{r} 3562 \\ \times 27 \\ \hline \end{array}$

$\begin{array}{r} 7451 \\ \times 54 \\ \hline \end{array}$

$\begin{array}{r} 1920 \\ \times 83 \\ \hline \end{array}$

$\begin{array}{r} 9163 \\ \times 72 \\ \hline \end{array}$

$\begin{array}{r} 4276 \\ \times 56 \\ \hline \end{array}$

Lesson 1.3 Dividing 3 Digits by 2 Digits

$$71 \div 14 = 5$$

remainder 1

$$18 \div 14 = 1$$

remainder 4

$$14 \times 5 = 70$$

$$\begin{array}{r} 5 \\ 14 \overline{) 718} \\ \underline{- 70} \\ 18 \end{array}$$

The quotient is 51.
The remainder is 4.

$$\begin{array}{r} 51 \\ 14 \overline{) 718} \\ \underline{- 70} \\ 18 \\ \underline{- 14} \\ 4 \end{array}$$

$$\begin{array}{r} 51 \text{ r}4 \\ 14 \overline{) 718} \\ \underline{- 70} \\ 18 \\ \underline{- 14} \\ 4 \end{array}$$

Divide.

a

b

c

d

1. $23 \overline{) 264}$

$32 \overline{) 571}$

$81 \overline{) 724}$

$52 \overline{) 328}$

2. $61 \overline{) 488}$

$35 \overline{) 175}$

$82 \overline{) 362}$

$47 \overline{) 719}$

3. $97 \overline{) 891}$

$26 \overline{) 423}$

$43 \overline{) 916}$

$57 \overline{) 649}$

Lesson 1.4 Dividing 4 Digits by 2 Digits

$$51 \div 23 = 2 \text{ remainder } 5$$

$$57 \div 23 = 2 \text{ remainder } 11$$

$$113 \div 23 = 4 \text{ remainder } 21$$

$$23 \times 2 = 46$$

$$\begin{array}{r} 2 \\ 23 \overline{) 5173} \\ \underline{46} \\ 5 \end{array}$$

$$23 \times 2 = 46$$

$$23 \times 4 = 92$$

The quotient is 224.
The remainder is 21.

$$\begin{array}{r} 22 \\ 23 \overline{) 5173} \\ \underline{-46} \\ 57 \\ \underline{-46} \\ 113 \end{array}$$

$$\begin{array}{r} 224 \\ 23 \overline{) 5173} \\ \underline{-46} \\ 57 \\ \underline{-46} \\ 113 \\ \underline{-92} \\ 21 \end{array}$$

$$\begin{array}{r} 224 \text{ r}21 \\ 23 \overline{) 5173} \\ \underline{-46} \\ 57 \\ \underline{-46} \\ 113 \\ \underline{-92} \\ \textcircled{21} \end{array}$$

Divide.

a

b

c

d

1. $43 \overline{) 6571}$

$22 \overline{) 8294}$

$62 \overline{) 3628}$

$88 \overline{) 4773}$

2. $56 \overline{) 2829}$

$89 \overline{) 4340}$

$75 \overline{) 8195}$

$29 \overline{) 4872}$

3. $63 \overline{) 1890}$

$31 \overline{) 6263}$

$96 \overline{) 5379}$

$48 \overline{) 7246}$

Lesson 1.5 Problem Solving**SHOW YOUR WORK**

Solve each problem.

1. At the Bead Shop, there are 25 rows of beads. If there are 320 beads in each row, how many beads are in the shop?

There are _____ beads in the shop.

2. The cafeteria planned to bake 3 cookies for every student in the school. If there are 715 students, how many cookies does the cafeteria need to bake?

The cafeteria needs to bake _____ cookies.

3. A group of 123 students went on a field trip to collect seashells. If the students collected 15 shells each, how many shells did they collect?

The students collected _____ shells.

4. A girls' club is trying to get into the record books for the most hair braids. There are 372 girls. If each girl braids her hair into 40 little braids, how many braids will they have?

They will have _____ braids.

5. A school bought 831 boxes of computer paper for the computer lab. Each box had 59 sheets of paper inside it. How many sheets of paper were bought in total?

The school bought _____ sheets of paper.

6. A vat of orange juice contains the juice from 231 oranges. If a company has 611 vats, how many oranges would it need to fill them all?

The company would need _____ oranges.

1.

2.

3.

4.

5.

6.

Lesson 1.5 Problem Solving**SHOW YOUR WORK**

Solve each problem.

1. The Pancake Restaurant served 348 pancakes. If 87 customers ate an equal number of pancakes, how many did each person eat?

Each person ate _____ pancakes.

2. Gary opened a bag of candy containing 126 pieces. He wants to give each of his guests the same number of pieces. If he has 42 guests, how many pieces does each person get?

Each guest gets _____ pieces.

3. At the local fair, 358 people waited in line for a boat ride. The boat can hold 8 people. How many trips will the boat have to take for everyone to get a ride?

The boat will have to take _____ trips.

4. Cafeteria workers were putting milk cartons into crates. They had 1,052 cartons and 36 cartons in each crate. How many full crates did they end up with?

They ended up with _____ full crates.

5. A machine in a candy company creates 9,328 pieces of candy each hour. If a box holds 98 pieces of candy, how many boxes can be filled in one hour?

_____ boxes can be filled in one hour.

6. Oliver was trying to beat his old score of 1,842 points in a video game. If he scores exactly 85 points each round, how many rounds would he need to play to beat his old score?

Oliver should play _____ rounds.

**Check What You Learned****Multiplying and Dividing Whole Numbers**

Multiply.

$$\begin{array}{r} \text{1.} \quad 280 \\ \times 93 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \quad 814 \\ \times 37 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \quad 497 \\ \times 48 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \quad 6492 \\ \times 82 \\ \hline \end{array}$$

$$\begin{array}{r} \text{2.} \quad 2158 \\ \times 32 \\ \hline \end{array}$$

$$\begin{array}{r} 8291 \\ \times 54 \\ \hline \end{array}$$

$$\begin{array}{r} 212 \\ \times 561 \\ \hline \end{array}$$

$$\begin{array}{r} 394 \\ \times 627 \\ \hline \end{array}$$

$$\begin{array}{r} \text{3.} \quad 4176 \\ \times 283 \\ \hline \end{array}$$

$$\begin{array}{r} 9192 \\ \times 562 \\ \hline \end{array}$$

$$\begin{array}{r} 7315 \\ \times 141 \\ \hline \end{array}$$

$$\begin{array}{r} 5639 \\ \times 374 \\ \hline \end{array}$$

Divide.

$$\text{4.} \quad 6 \overline{)2142}$$

$$4 \overline{)8676}$$

$$49 \overline{)392}$$

$$34 \overline{)2589}$$

$$\text{5.} \quad 72 \overline{)745}$$

$$45 \overline{)213}$$

$$61 \overline{)1708}$$

$$94 \overline{)4649}$$

$$\text{6.} \quad 52 \overline{)9243}$$

$$68 \overline{)3174}$$

$$16 \overline{)4236}$$

$$81 \overline{)2748}$$

**Check What You Learned****SHOW YOUR WORK****Multiplying and Dividing Whole Numbers**

Solve each problem.

7. The park's sprinklers can spray 1,748 gallons of water on the grass in 38 minutes. How many gallons can they spray in one minute?

They can spray _____ gallons per minute.

8. The auto factory will build 1,408 new trucks in the next 32 days. How many will it build in one day?

It will build _____ trucks each day.

9. Pizza Depot will open 31 new restaurants next year. Each restaurant will need 27 employees. How many employees will Pizza Depot need to hire for the new restaurants?

Pizza Depot will need to hire _____ employees.

10. The parking lot has 1,326 spaces to hold cars. The lot is divided into 26 equal rows. How many cars can be parked in each row?

_____ cars can park in each row.

11. If a machine can make 761 pencils in a second, how many pencils can it make in 23 seconds?

It can make _____ pencils.

12. In New York City, each mail truck has 1,023 pieces of junk mail. If there are 71 mail trucks, how much junk mail do they have total?

They have _____ pieces of junk mail.

7.

8.

9.

10.

11.

12.

**Check What You Know**

Understanding Place Value

What is the value of the underlined digit?

1.

^a
 4,332

^b
 52,321

Write the digit that is in the given place value.

2.

30.146 – hundredth

1,325.12 – thousand

3.

1.325 – tenth

731.045 – one

Convert each power of ten to a standard number.

4.

 10^4 _____ 10^6 _____

Multiply or divide by the given power of ten.

5.

 $8.75 \times 1,000$ _____ $7,643 \div 100$ _____

6.

 $45.67 \times 1,000$ _____ $34,981 \div 1,000$ _____

Write the numbers in expanded form.

7.

592,682

78.364



Check What You Know

Understanding Place Value

Compare each pair of decimals using $<$, $>$, or $=$.

- | | a | | b | | c |
|----|---------------------|--|------------------|--|--------------------|
| 8. | 6.203 _____ 6.214 | | 2.4 _____ 2.400 | | 48.28 _____ 46.281 |
| 9. | 72.355 _____ 72.335 | | 5.76 _____ 50.76 | | 9.763 _____ 9.673 |

Order the decimals from least to greatest.

10. 72.5, 73.943, 72.1, 73.77
- _____

11. 43.2, 43.219, 42.1, 42.59
- _____

12. 38.507, 38.4, 38.23, 39.5
- _____

13. 71.743, 71.3, 72.43, 72.5
- _____

Round each number to the indicated place.

- | | a | | b | | c |
|-----|----------------|--|----------------|--|--------------------|
| 14. | 3.171 – tenths | | 2.253 – ones | | 5.126 – hundredths |
| | _____ | | _____ | | _____ |
| 15. | 64.967 – ones | | 9.432 – tenths | | 1.225 – hundredths |
| | _____ | | _____ | | _____ |

Lesson 2.1 Understanding Place Value to Millions

Write the value of the underlined digit.

2,325,976

The value of the 2 is 2 ten thousands, or 20,000.

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
2	3	<u>2</u>	5	9	7	6

Write the numerical value of the digit in the place named.

	a	b	c	d
1.	5,363,246 millions <u>5,000,000</u>	952,418 ten thousands _____	4,510,367 tens _____	8,123,405 ones _____
2.	9,867,823 hundred thousands _____	567,345 thousands _____	1,328,976 millions _____	5,004,002 thousands _____
3.	2,982,023 thousands _____	345,632 ten thousands _____	6,543,211 millions _____	2,566,900 hundred thousands _____

Name the place of the underlined digit.

	a	b
4.	2, <u>5</u> 64,740 _____ is in the _____ place.	<u>3</u> ,297,134 _____ is in the _____ place.
5.	8,7 <u>6</u> 1,089 _____ is in the _____ place.	<u>9</u> ,345,187 _____ is in the _____ place.
6.	<u>8</u> 59,632 _____ is in the _____ place.	<u>4</u> ,689,322 _____ is in the _____ place.

Lesson 2.2 Understanding Place Value with Decimals

In 1,324.973 what place value is the 9?

thousands	hundreds	tens	ones	tenths	hundredths	thousandths
1	3	2	4	9	7	3

The 9 can be named nine tenths, $\frac{9}{10}$, or 0.9.

Write the place value of the given number.

	a	b	c
1.	3 in \$10.03	7 in 7,000.2	5 in 13.5
2.	2 in \$25.75	4 in 5,238.004	8 in 11.8
3.	1 in \$561.07	3 in 0.037	6 in 0.136

Write the digit that is in the given place value.

	a	b	c	d
4.	432.14 hundreds	325.17 tenths	3,214.005 thousandths	25.132 tens
5.	30.146 hundredths	25.523 thousandths	125.043 tenths	1,325 thousands
6.	100.304 tenths	1.325 hundredths	1.005 thousandths	731.045 ones

Lesson 2.3 Powers of Ten

An **exponent** is a number that shows how many times a base number is to be used in multiplication. A **power of ten** is an exponent where the base number is always 10.

$$10^1 = \underline{10} = \underline{10}$$

$$10^2 = \underline{10} \times \underline{10} = \underline{100}$$

$$10^3 = \underline{10} \times \underline{10} \times \underline{10} = \underline{1,000}$$

$$10^4 = \underline{10} \times \underline{10} \times \underline{10} \times \underline{10} = \underline{10,000}$$

Convert the values below to a power of ten.

	a	b	c
1.	100,000	1,000,000	10
	_____	_____	_____
2.	10,000,000	100	1,000,000,000
	_____	_____	_____

Convert these powers of ten to standard numbers.

	a	b	c
3.	10^7	10^5	10^3
	_____	_____	_____
4.	10^8	10^{12}	10^6
	_____	_____	_____

Lesson 2.4 Patterns of Zeros and Decimals in Products and Quotients

When a number is multiplied or divided by a multiple of 10, the number of zeros and decimals in the product or quotient will vary based on the value of the multiple of 10 that is used.

0.2658×1	$= 0.2658$	$265,800. \div 1$	$= 265,800.0$
0.2658×10	$= 2.658$	$265,800. \div 10$	$= 26,580.0$
0.2658×100	$= 26.58$	$265,800. \div 100$	$= 2,658.0$
$0.2658 \times 1,000$	$= 265.8$	$265,800. \div 1,000$	$= 265.8$
$0.2658 \times 10,000$	$= 2,658.0$	$265,800. \div 10,000$	$= 26.58$
$0.2658 \times 100,000$	$= 26,580.0$	$265,800. \div 100,000$	$= 2.658$
$0.2658 \times 1,000,000$	$= 265,800.0$	$265,800. \div 1,000,000$	$= 0.2658$

When a number is multiplied by a power of 10, the decimal in the product moves to the right and zeros are added to the left of the decimal when needed.

When a number is divided by a power of 10, the decimal in the product moves to the left and zeros are added to the right of the decimal when needed.

Multiply by the power of ten to find the product.

	a	b	c
1.	21.48×10	$6.07 \times 1,000$	7.58×100
	_____	_____	_____
2.	$7.434 \times 100,000$	$0.7 \times 1,000$	$0.502 \times 10,000$
	_____	_____	_____

Divide by the power of ten to find the quotient.

3.	$13.4 \div 10$	$27.65 \div 100$	$320.7 \div 10$
	_____	_____	_____
4.	$3.457 \div 100$	$82.93 \div 10$	$726.9 \div 1,000$
	_____	_____	_____

Lesson 2.5 Expanded Form with Whole Numbers

Expanded form is a way to write a number that shows the sum of values of each digit of a number. To use expanded form, a number has to be separated into each of its parts using place value.

$$5,423 = 5,000 + 400 + 20 + 3$$

$$39,572 = 30,000 + 9,000 + 500 + 70 + 2$$

Write each number in expanded form.

	a	b
1.	430	721
2.	3,465	43,645
3.	90,327	4,009
4.	653,410	103,254
5.	199,482	32,451
6.	9,342,751	2,500,055
7.	598,721	69,003

Lesson 2.6 Expanded Form with Decimals

Expanded form can also be used with decimals. When a number contains decimal parts, they can be separated in the same way whole number parts can.

$$396.636 = 300 + 90 + 6 + 0.6 + 0.03 + 0.006$$

$$94,524.51 = 90,000 + 4,000 + 500 + 20 + 4 + 0.5 + 0.01$$

Write each number in expanded form.

1.

268.849

657.254

2.

182.19

9989.52

3.

756.234

332.115

4.

435.461

14.514

5.

2,948.23

69.241

6.

219.833

38,966.3

7.

519.5

971.396

Lesson 2.7 Comparing Decimals

Which is larger: 4.218 or 4.222?

4.2184.222

The ones are the same.
 The tenths are the same.
 The hundredths are different.

 $4.218 < 4.222$

4.218 is less than 4.222.

Compare each pair of decimals using $<$, $>$, or $=$.

a

b

c

1. 5.213 ____ 5.312

3.1 ____ 3.10

28.35 ____ 28.251

2. 6.32 ____ 6.032

5.17 ____ 5.172

144.3 ____ 144

3. 7.325 ____ 6.425

3.14 ____ 2.99

48.28 ____ 48.280

4. 0.213 ____ 0.223

1.006 ____ 1.060

0.010 ____ 0.001

5. 0.674 ____ 0.644

3.122 ____ 3.220

43.01 ____ 43.100

6. 2.897 ____ 2.90

0.43 ____ 0.430

0.790 ____ 0.789

7. 0.571 ____ 0.58

10.462 ____ 100.46

9.36 ____ 9.306

8. 17.110 ____ 17.101

0.182 ____ 1.820

98.999 ____ 99.001

9. 1.090 ____ 1.009

25.224 ____ 25.242

63.12 ____ 63.2

10. 5.703 ____ 5.730

0.479 ____ 4.79

81.40 ____ 81.400

Lesson 2.8 Ordering Decimals

To order a group of decimals, line up the decimal points.

2.14, 2.08, 2.1, and 2.01

2.14

2.08

2.1

2.01

All the ones are the same. 2.14 and 2.1 have the same tenths digit, but 4 is greater than zero. In the other two numbers, 8 is greater than 1.

List from least to greatest:

2.01, 2.08, 2.1, 2.14

Order the decimals from least to greatest.

1. 7.52, 7.498, 7.521, 7.6

2. 0.028, 0.080, 0.082, 0.008

3. 12.193, 12.201, 12.191, 12.200

4. 0.116, 0.108, 0.113, 0.117

5. 22.5, 22.67, 23.8, 23.703

6. 12.249, 12.13, 12.5, 12.2

Lesson 2.9 Rounding to the Nearest Whole Number

Round 15.897 to the nearest whole number.

Look at the tenths digit. 15.897

8 is greater than or equal to 5, so round 5 to 6 in the ones place.

16

Round 234.054 to the nearest whole number.

Look at the tenths digit. 234.054

0 is less than 5, so keep the 4 in the ones place.

234

Round each to the nearest whole number.

	a	b	c	d
1.	6.421	5.882	19.235	2.371
	_____	_____	_____	_____
2.	45.288	97.5	12.003	72.71
	_____	_____	_____	_____
3.	13.936	8.42	1.100	65.39
	_____	_____	_____	_____
4.	98.55	269.57	14.369	23.09
	_____	_____	_____	_____
5.	95.645	8.67	99.198	51.70
	_____	_____	_____	_____
6.	29.98	98.4	33.333	67.67
	_____	_____	_____	_____

Lesson 2.10 Rounding Decimals

Round 2.137 to the nearest tenth.

Look at the hundredths digit. 2.137

3 is less than 5, so keep the 1 in the tenths place.

2.1

Round 8.447 to the nearest hundredth.

Look at the thousandths digit. 8.447

7 is greater than or equal to 5, so round 4 to 5 in the hundredths place.

8.45

Round each number to the nearest tenth.

	a	b	c	d
1.	7.322	1.156	3.770	6.923
2.	7.953	4.438	5.299	8.171
3.	4.734	5.629	0.138	9.818

Round each number to the nearest hundredth.

4.	5.872	2.212	6.447	1.735
5.	4.397	4.442	9.161	3.476
6.	5.849	4.484	0.987	0.155

**Check What You Learned****Understanding Place Value**

What is the value of the underlined digit?

1. 83,764 _____

328.367 _____

Write the digit that is in the given place value.

2. 32.376 – thousandths _____ 3,693.34 – hundreds _____

3. 4.398 – hundredths _____ 3,982.597 – tens _____

Convert these powers of ten to standard numbers.

4. 10^9 _____

10^5 _____

Multiply or divide by the given power of ten.

5. 532.4×100 _____ $12.22 \div 10$ _____

6. $4.412 \times 1,000$ _____ $2,934.18 \div 100$ _____

Write the numbers below in expanded form.

7. 43.436 _____

3,682.3 _____

**Check What You Learned****Understanding Place Value**Compare each pair of decimals using $<$, $>$, or $=$.

$$8. \quad 5.113 \quad \text{a} \quad \underline{\hspace{1cm}} \quad 5.112 \quad \text{b} \quad 42.882 \quad \underline{\hspace{1cm}} \quad 43.88 \quad \text{c} \quad 4.6 \quad \underline{\hspace{1cm}} \quad 4.600$$

$$9. \quad 7.295 \quad \underline{\hspace{1cm}} \quad 72.95 \quad 23.54 \quad \underline{\hspace{1cm}} \quad 23.45 \quad 9.563 \quad \underline{\hspace{1cm}} \quad 9.653$$

Order the numbers from least to greatest.

$$10. \quad 5.6, 6.13, 5, 6.723$$

$$11. \quad 75.931, 75, 74.2, 74.61$$

$$12. \quad 21.1, 20.5, 21.967, 20.35$$

$$13. \quad 47.85, 46.793, 47.7, 47.5$$

Round each number to the indicated place.

$$14. \quad 7.559 - \text{ones}$$

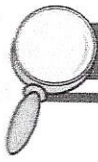
$$2.165 - \text{tenths}$$

$$5.471 - \text{hundredths}$$

$$15. \quad 3.337 - \text{hundredths}$$

$$66.34 - \text{ones}$$

$$9.245 - \text{tenths}$$

**Check What You Know****Using Decimals**

Add or subtract.

$$\begin{array}{r} \text{a} \\ 1. \quad 46.38 \\ + 21.25 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \\ 732.84 \\ + 21.25 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \\ 64.80 \\ + 7.31 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \\ 102.90 \\ + 0.26 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 78.62 \\ - 38.89 \\ \hline \end{array}$$

$$\begin{array}{r} 8.86 \\ - 5.29 \\ \hline \end{array}$$

$$\begin{array}{r} 9.40 \\ - 3.62 \\ \hline \end{array}$$

$$\begin{array}{r} 75.1 \\ - 23.2 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 54.45 \\ + 19.26 \\ \hline \end{array}$$

$$\begin{array}{r} 45.7 \\ - 15.3 \\ \hline \end{array}$$

$$\begin{array}{r} 118.56 \\ + 1.25 \\ \hline \end{array}$$

$$\begin{array}{r} 15.0 \\ + 12.1 \\ \hline \end{array}$$

Multiply or divide.

$$\begin{array}{r} \text{a} \\ 4. \quad 1.3 \\ \times 4.8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \\ 2.07 \\ \times 3.4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \\ 5.74 \\ \times 0.44 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \\ 3.01 \\ \times 2.9 \\ \hline \end{array}$$

$$5. \quad 3.8 \overline{)15.96}$$

$$0.12 \overline{)0.48}$$

$$1.75 \overline{)67.55}$$

$$0.25 \overline{)300}$$

**Check What You Know****SHOW YOUR WORK****Using Decimals**

Solve each problem.

6. In a recent week, the rainfall was 0.2 inches for Monday, 0.7 inches for Tuesday, and 1.6 inches for Wednesday. What was the total amount of rainfall for those 3 days?

The total amount of rainfall was _____ inches.

7. Miranda wants to buy a tennis racket that costs \$109.95. She has \$68.50 saved from babysitting. How much more money does she need?

Miranda needs _____.

8. Julia went to the store and bought 3 items that cost \$5.87, \$21.62, and \$11.48. What was the total cost of these items?

The total cost of the items was _____.

9. If a car averages 23.2 miles per gallon of gasoline, how far can it go on 15.25 gallons?

The car can go _____ miles.

10. Maria bought gifts for 7 of her friends. She spent \$86.66. If she spent the same amount on each of her friends, how much did she spend on each?

Maria spent _____ on each friend.

11. A small tree was measured at 3.67 feet tall. It can grow to 25 times that height. What is the tallest height the tree can be expected to reach?

The tree can reach _____ feet.

6.

7.

8.

9.

10.

11.



Check What You Know

Understanding Fractions

Change each improper fraction to a mixed number.

1. a b c d e
- | | | | | |
|----------------------|----------------------|----------------------|----------------------|----------------------|
| $\frac{27}{5}$ _____ | $\frac{35}{8}$ _____ | $\frac{15}{7}$ _____ | $\frac{25}{4}$ _____ | $\frac{17}{3}$ _____ |
|----------------------|----------------------|----------------------|----------------------|----------------------|

Change each mixed number to an improper fraction.

2. $3\frac{5}{16}$ _____ $3\frac{3}{5}$ _____ $2\frac{3}{7}$ _____ $1\frac{3}{16}$ _____ $4\frac{1}{3}$ _____

Find the greatest common factor for each set of numbers.

3. 18 and 22 25 and 50 54 and 36 40 and 8 16 and 24
- _____
4. 10 and 15 24 and 30 8 and 10 5 and 24 24 and 40
- _____

Find the least common multiple for each set of numbers.

5. 8 and 12 15 and 4 20 and 4 3 and 24 12 and 4
- _____
6. 15 and 2 12 and 30 4 and 30 6 and 40 10 and 2
- _____

 Check What You Know**Understanding Fractions**

Write each fraction in simplest form.

a

7. $\frac{6}{9}$ _____

b

$\frac{12}{36}$ _____

c

$\frac{20}{32}$ _____

d

$\frac{21}{49}$ _____

8. $\frac{15}{18}$ _____

$\frac{40}{45}$ _____

$\frac{12}{14}$ _____

$\frac{19}{38}$ _____

Find the equivalent fraction.

9. $\frac{4}{6} = \frac{\quad}{12}$

$\frac{1}{9} = \frac{\quad}{18}$

$\frac{5}{6} = \frac{\quad}{12}$

$\frac{5}{12} = \frac{\quad}{60}$

10. $\frac{2}{5} = \frac{\quad}{20}$

$7 = \frac{\quad}{6}$

$6 = \frac{\quad}{11}$

$4 = \frac{\quad}{7}$

Compare each pair of fractions using $<$, $>$, or $=$.

11. $\frac{8}{12}$ _____ $\frac{1}{12}$

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

$\frac{6}{9}$ _____ $\frac{2}{5}$

$\frac{4}{6}$ _____ $\frac{5}{9}$

12. $\frac{3}{6}$ _____ $\frac{7}{9}$

$\frac{2}{5}$ _____ $\frac{1}{4}$

$\frac{2}{7}$ _____ $\frac{2}{3}$

$\frac{6}{7}$ _____ $\frac{1}{5}$

Convert each fraction into a decimal. Convert each decimal into a fraction.

13. $\frac{2}{5}$ _____

$\frac{3}{6}$ _____

$\frac{2}{8}$ _____

$\frac{7}{8}$ _____

14. 0.5 _____

0.6 _____

0.75 _____

0.625 _____

Lesson 4.2 Changing Improper Fractions to Mixed Numbers

$\frac{13}{6}$ means $13 \div 6$ or $6 \overline{)13}$

$$\begin{array}{r} 2\frac{1}{6} \\ 6 \overline{)13} \\ -12 \\ \hline 1 \end{array}$$

So, $\frac{13}{6} = 2\frac{1}{6}$

$1 \rightarrow 1 \div 6 = \left(\frac{1}{6}\right)$

$\frac{13}{6}$ is an **improper fraction**, meaning the denominator divides the numerator at least one time. In other words, the numerator is greater than the denominator.

$2\frac{1}{6}$ is a **mixed number**. This is the simplest form of an improper fraction.

Write each improper fraction as a mixed number in simplest form.

1. $\frac{5}{3}$ _____

$\frac{7}{6}$ _____

$\frac{9}{5}$ _____

2. $\frac{3}{2}$ _____

$\frac{4}{3}$ _____

$\frac{8}{5}$ _____

3. $\frac{7}{5}$ _____

$\frac{9}{7}$ _____

$\frac{5}{4}$ _____

4. $\frac{32}{6}$ _____

$\frac{51}{4}$ _____

$\frac{49}{9}$ _____

5. $\frac{66}{5}$ _____

$\frac{83}{3}$ _____

$\frac{28}{5}$ _____

6. $\frac{29}{3}$ _____

$\frac{28}{7}$ _____

$\frac{64}{6}$ _____

Lesson 4.3 Changing Mixed Numbers to Improper Fractions

To change a mixed number to a fraction, multiply the denominator by the whole number. Then, add the numerator to the product to get the new numerator. Keep the denominator the same.

$$4\frac{3}{5} = \frac{(5 \times 4) + 3}{5} = \frac{20 + 3}{5} = \frac{23}{5}$$

$$2\frac{3}{4} = \frac{(4 \times 2) + 3}{4} = \frac{8 + 3}{4} = \frac{11}{4}$$

Change each mixed number to an improper fraction.

a	b	c	d
1. $2\frac{5}{8}$ _____	$3\frac{1}{4}$ _____	$2\frac{3}{7}$ _____	$4\frac{1}{1}$ _____

2. $3\frac{3}{4}$ _____	$2\frac{5}{12}$ _____	$4\frac{1}{6}$ _____	$5\frac{2}{3}$ _____
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3. $2\frac{7}{16}$ _____	$3\frac{1}{2}$ _____	$1\frac{7}{16}$ _____	$2\frac{5}{8}$ _____
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4. $3\frac{1}{3}$ _____	$4\frac{2}{5}$ _____	$3\frac{1}{8}$ _____	$7\frac{1}{3}$ _____
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5. $8\frac{2}{3}$ _____	$1\frac{2}{5}$ _____	$2\frac{3}{7}$ _____	$3\frac{8}{9}$ _____
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6. $4\frac{2}{5}$ _____	$3\frac{5}{6}$ _____	$2\frac{4}{9}$ _____	$4\frac{5}{12}$ _____
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