

MATH'S MATE

Term 4 - Sheet 1

Name:

Due Date: / /

Parent's Signature:

QUOTE OF THE WEEK

The secret of life is not to do what you like, but to like what you do.
American Proverb

1. [+ Whole Numbers to 10]

	24	15	53	6	18	39	22	10	37	41
+ 5	29	20	58	11	23	44	27	15	42	46

2. [- Whole Numbers to 10]

	22	35	14	18	29	7	10	21	6	33
- 2	20	33	12	16	27	5	8	19	4	31

3. [x Whole Numbers to 12]

	7	11	3	9	5	8	4	12	10	6
x 10	70	110	30	90	50	80	40	120	100	60

4. [+ Whole Numbers to 12]

	24	9	6	27	21	12	18	30	15	33
÷ 3	8	3	2	9	7	4	6	10	5	11

5. [Large Number +, -]

$$\begin{array}{r} 83,026 \\ - 75,09 \\ \hline \end{array}$$

75,517

10. [Fraction x, ÷] *

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

 $\frac{1}{4}$

11. [Percents] *

$$1\% \text{ of } 200 =$$

2

6. [Large Number x, ÷]

$$\frac{7600}{40} =$$

190

12. [Decimals / Fractions / Percents]

Place in order from smallest to largest:

0.68, 0.08, 0.86, 0.806

0.08, 0.68, 0.806, 0.86

17. [Exploring Number]

Round 12.48 to the nearest whole number.

12

18. [Multiples / Factors / Primes]

Express 52 as a product of prime numbers by completing the factor tree.

$$\begin{array}{c} 52 \\ = 2 \cdot 26 \\ = 2 \cdot 2 \cdot 13 \end{array}$$

7. [Decimal +, -]

$$\begin{array}{r} 73.04 \\ + 2.9 \\ + 68.5 \\ \hline \end{array}$$

144.44

13. [Integers]

Leon owed \$200. He won \$800. How much does Leon now have?

\$600

19. [Number Patterns]

Complete the pattern:

2, 5, 11, 20, 32, 47, 65

8. [Decimal x, ÷]

$$\begin{array}{r} 12.3 \\ \times 7 \\ \hline \end{array}$$

86.1

14. [Rates / Ratios] *

Which is cheaper per DVD?

- A) \$20 for 25 DVDs
B) \$30 for 40 DVDs

B

20. [Expressions]

Choose the like terms:

3x, y, 2x

3x, 2x

21. [Substitution] *

If $g = 9$ and $h = 2$, find the value of $g - h - 4$

3

9. [Fraction +, -] *

$$\frac{2}{5} - \frac{3}{10} =$$

 $\frac{1}{10}$

16. [Order of Operations] *

$$(16 - 8) \div (2 + 2) =$$

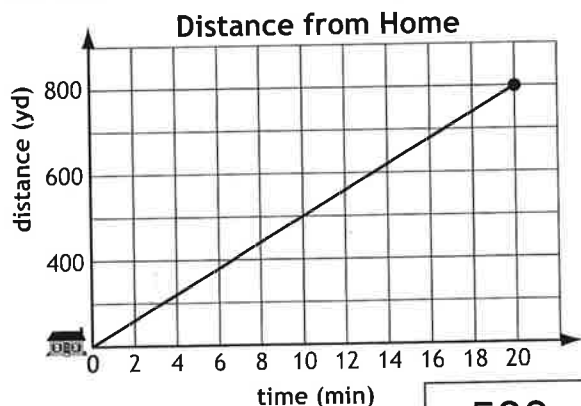
2

22. [Equations] *

$$3 + 6 \times \boxed{2} = 15$$

23. [Graphs & Functions]

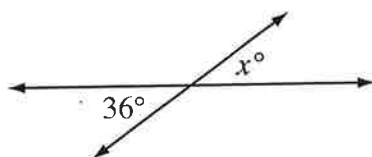
This graph shows the distance from home at any time during Grace's walk. How far had Grace walked after 10 minutes?



500 yd

24. [Shapes]

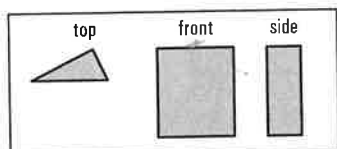
Find the value of x° .



36°

25. [Exploring Geometry]

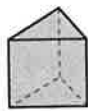
Which solid has these top, front and side views?



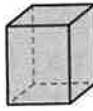
A)



B)



C)



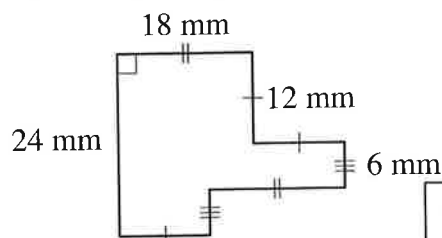
B

26. [Units of Measurement / Time] *

4 hours = **240** minutes

27. [Perimeter] *

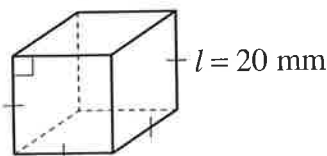
Calculate the perimeter of this shape.



108 mm

28. [Area / Volume] *

Using $V = l^3$ find the volume of the cube.

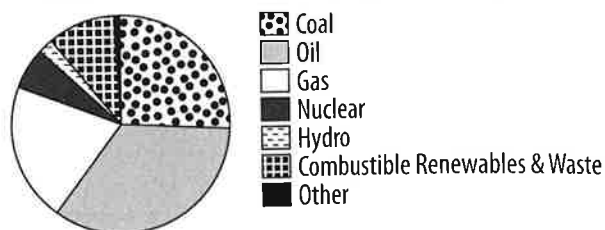


8000 mm³

29. [Statistics]

Which type of energy source is closest to twice combustible renewables and waste?

Total World Primary Energy Supply (2010)

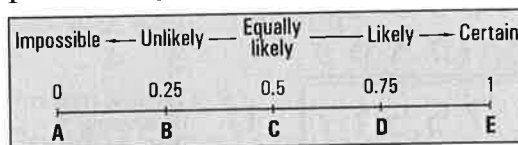


gas

30. [Probability] *

'A yellow marble will be drawn from a bag containing 2 black marbles and 6 yellow marbles.'

Which letter A to E best represents the probability of the event?



D

31. [Problem Solving 1]

Complete the multiplication table.

×	3	5	2	6
9	27	45	18	54
2	6	10	4	12
4	12	20	8	24
7	21	35	14	42

32. [Problem Solving 2] *

What is the least number of different colors needed to paint a cube so that no adjacent faces have the same color?

3

33. [Problem Solving 3]

Use the digits 1, 3, 5 and 7, once each, to complete this multiplication. Make the smallest possible answer.

$$\begin{array}{r} 15 \\ \times 37 \\ \hline 105 \\ 450 \\ \hline 555 \end{array}$$

MATH'S MATE

Term 4 - Sheet 2

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QUOTE OF THE WEEK

When working towards the solution of a problem, it always helps if you know the answer.
Rossiter

1. [+ Whole Numbers to 10]

	45	32	14	18	9	26	37	13	20	11
+ 3	48	35	17	21	12	29	40	16	23	14

2. [- Whole Numbers to 10]

	8	19	42	35	14	27	31	40	16	33
- 6	2	13	36	29	8	21	25	34	10	27

3. [× Whole Numbers to 12]

	10	5	1	8	3	7	2	9	4	6
× 7	70	35	7	56	21	49	14	63	28	42

4. [+ Whole Numbers to 12]

	90	27	63	45	72	36	81	18	54	9
÷ 9	10	3	7	5	8	4	9	2	6	1

5. [Large Number +, -]

$$\begin{array}{r} 59,000 \\ - 2,007 \\ \hline \end{array}$$

56,993

6. [Large Number ×, ÷]

$$\frac{54,000}{200} =$$

270

7. [Decimal +, -]

$$\begin{array}{r} 43.8 \\ 6.57 \\ + 20.59 \\ \hline \end{array}$$

70.96

8. [Decimal ×, ÷]

$$\begin{array}{r} 14.08 \\ \times 4 \\ \hline \end{array}$$

56.32

9. [Fraction +, -] *

$$\frac{1}{8} + \frac{3}{4} =$$

 $\frac{7}{8}$

10. [Fraction ×, ÷] *

$$\frac{1}{4} \times \frac{4}{5} =$$

 $\frac{1}{5}$

11. [Percents] *

$$33\frac{1}{3}\% \text{ of } 90 =$$

30

12. [Decimals / Fractions / Percents]

Place in order from largest to smallest:

0.035, 0.53, 0.05, 0.305

0.53, 0.305, 0.05, 0.035

13. [Integers] *

A bear weighs 210 lb. During hibernation it loses 42 lb, and after it gains 30 lb. What does the bear now weigh?

198 lb

14. [Rates / Ratios] *

Which is cheaper per call?

- A) \$6 for 15 calls
B) \$5 for 10 calls

A

15. [Exponents / Square Roots]

$$\sqrt{3600} =$$

60

16. [Order of Operations] *

$$50 - (2 + 3 \times 2) =$$

42

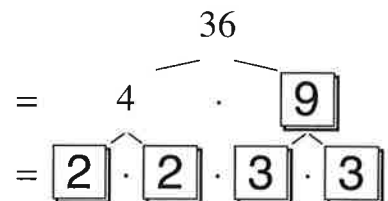
17. [Exploring Number]

Round 14.13 to the nearest whole number.

14

18. [Multiples / Factors / Primes]

Express 36 as a product of prime numbers by completing the factor tree.



19. [Number Patterns]

Complete the pattern:

20, 18, 15, 13, 10, **8, 5**

20. [Expressions]

Choose the like terms:

3h, i, 4i

i, 4i

21. [Substitution] *

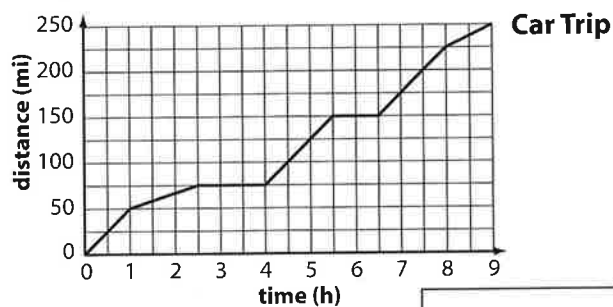
If $p = 3$ and $q = 10$, find the value of $17 + p - q$ **10**

22. [Equations] *

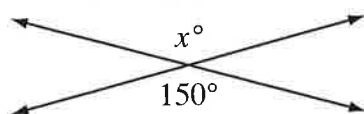
$$4 + 8 \times \boxed{3} = 28$$

23. [Graphs & Functions]

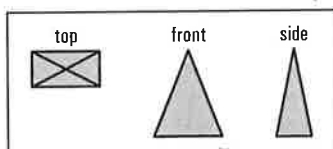
This graph shows the distance traveled by a car over a 9-hour period. How long does the car take to travel 200 miles?

**7.5 h****24.** [Shapes]

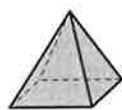
Find the value of x° .

**150°****25.** [Exploring Geometry]

Which solid has these top, front and side views?



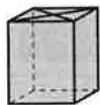
A)



B)



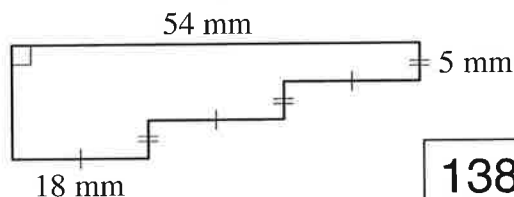
C)

**A****26.** [Units of Measurement / Time] *

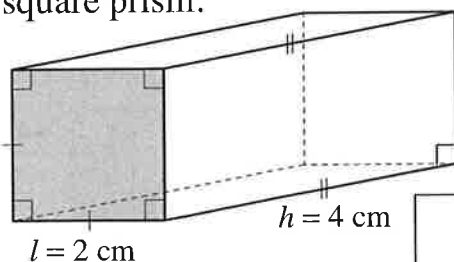
15 minutes = **900** seconds

27. [Perimeter] *

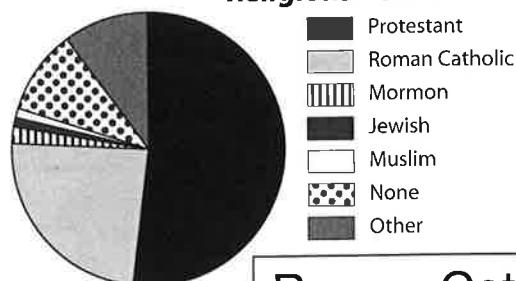
Calculate the perimeter of this shape.

**138 mm****28.** [Area / Volume] *

Using $V = l^2h$ find the volume of the square prism.

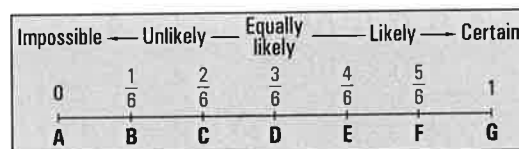
**16 cm³****29.** [Statistics]

Which religion makes up nearly 25% or one quarter of the U.S. population?

Religions - USA**Roman Catholic****30.** [Probability] *

'A standard die is rolled and an even number comes up.'

Which letter A to G best represents the probability of the event?

**D****31.** [Problem Solving 1] *

In a flock of black and white sheep, 2 out of 5 sheep are white. If there are 8 more black sheep than white sheep, how many sheep are in the flock?

40**32.** [Problem Solving 2] *

Each of my daughters has as many brothers as sisters, but each of my sons has three times as many sisters as brothers. How many children do I have?

5**33.** [Problem Solving 3] ***Happy Numbers**

- Add the squares of the digits of a whole number to produce a new number.
- If you repeat this process and end up with the number 1, you have found a happy number. (e.g. 32 is a happy number)

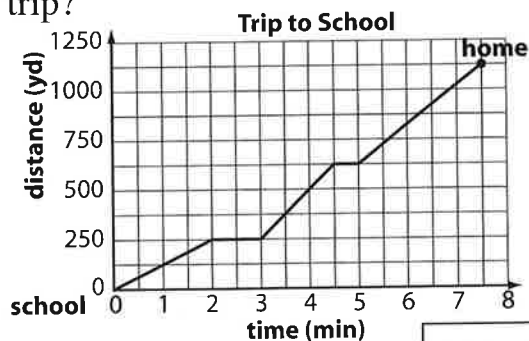
$$32 \rightarrow 9 + 4 = 13 \rightarrow 1 + 9 = 10 \rightarrow 1 + 0 = 1$$

Find the first two happy numbers greater than 40.

44 & 49

23. [Graphs & Functions]

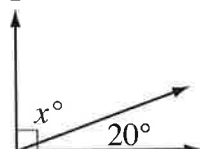
If Will cycles to school every day, what is the distance he cycles on his two-way trip?



2250 yd

24. [Shapes] *

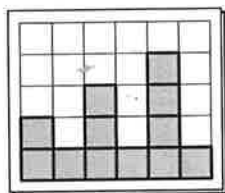
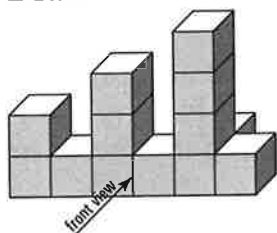
Find the value of x° .



70°

25. [Exploring Geometry]

Draw the front view of this solid.

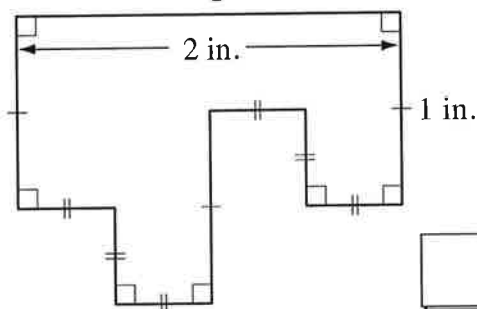


26. [Units of Measurement / Time] *

$\frac{1}{2}$ day = **12** hours

27. [Perimeter] *

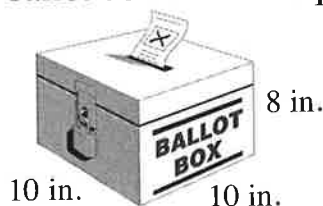
Calculate the perimeter of this shape.



8 in.

28. [Area / Volume] *

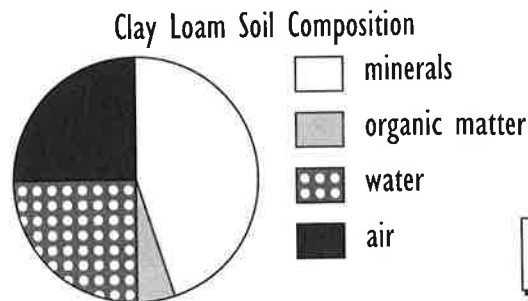
Using $V = l^2h$ find the volume of the ballot box that is a square prism.



800 in.³

29. [Statistics] *

Organic matter makes up 5% of the composition of clay loam soils. What percent of the composition is minerals?



45%

30. [Probability] *

Which event is most likely to happen?

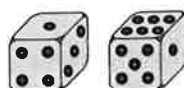
- A) drawing a consonant from letters A to Z
- B) selecting a multiple of 4 from the digits 0 to 9
- C) rolling a 5 on a standard die

A

31. [Problem Solving 1]

Two different views are shown of a pair of identical dice, each numbered 1 to 6. Which number is opposite the number 3?

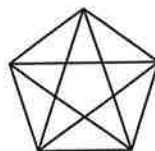
[Note: Though identical, the dice are not regular in that opposite sides do not always add to 7.]



5

32. [Problem Solving 2] *

How many triangles are there in this diagram?



$10 + 10 + 10 + 5 = 35$
1 piece 2 piece 3 piece 5 piece
triangle triangles triangles triangles

35

33. [Problem Solving 3] *

Kahi can eat 32 pieces of candy in one hour. Her sister can eat the same amount in 3 hours. How long will it take both of them together to eat 32 candies?

45 minutes

1. [+ Whole Numbers to 10]

	24	5	18	39	42	33	41	27	16	20
+ 4	28	9	22	43	46	37	45	31	20	24

2. [- Whole Numbers to 10]

	39	45	12	44	13	16	28	31	10	27
- 8	31	37	4	36	5	8	20	23	2	19

3. [× Whole Numbers to 12]

	5	7	3	4	9	10	2	6	11	8
× 6	30	42	18	24	54	60	12	36	66	48

4. [+ Whole Numbers to 12]

	60	50	15	55	35	40	25	30	20	45
÷ 5	12	10	3	11	7	8	5	6	4	9

5. [Large Number +, -]

$$\begin{array}{r} 48,000 \\ - 316 \\ \hline 47,684 \end{array}$$

6. [Large Number ×, ÷]

$$\begin{array}{r} 354 \\ 12 \overline{) 4248} \end{array}$$

7. [Decimal +, -]

$$\begin{array}{r} 69.4 \\ 80.79 \\ + 5.61 \\ \hline 155.80 \end{array}$$

8. [Decimal ×, ÷]

$$\begin{array}{r} 2.035 \\ \times 6 \\ \hline 12.210 \end{array}$$

9. [Fraction +, -] *

$$\frac{7}{12} + \frac{1}{6} = \frac{3}{4}$$

10. [Fraction ×, ÷] *

$$\frac{3}{5} \times \frac{1}{9} =$$

$$\frac{1}{15}$$

11. [Percents] *

$$66\frac{2}{3}\% \text{ of } 300 =$$

$$200$$

12. [Decimals / Fractions / Percents] *

Which fraction has greater value?

$$\frac{2}{5} \text{ or } \frac{1}{2}$$

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

13. [Integers]

In 44 B.C. Julius Caesar was assassinated. Rome was founded 691 years earlier. In what year was Rome founded?

$$735 \text{ B.C.}$$

14. [Rates / Ratios] *

If it takes 15 minutes to travel 25 km, how long will it take to travel 40 km at the same rate?

$$24 \text{ min}$$

15. [Exponents / Square Roots]

$$\sqrt{10,000} =$$

$$100$$

16. [Order of Operations] *

$$(7 - 3) \times (9 - 2) =$$

$$28$$

17. [Exploring Number]

Round 4.055 to two decimal places.

$$4.06$$

18. [Multiples / Factors / Primes]

Express 135 as a product of prime numbers by completing the factor tree.

$$\begin{array}{c} 135 \\ \swarrow \quad \searrow \\ 9 \quad 15 \\ \swarrow \quad \searrow \quad \swarrow \quad \searrow \\ 3 \quad 3 \quad 3 \quad 5 \end{array}$$

19. [Number Patterns]

Complete the pattern:

$$0, 1, 3, 7, 15, \underline{31}, \underline{63}$$

20. [Expressions]

Choose the like terms:

$$4e, e, 4f$$

$$4e, e$$

21. [Substitution] *

If $y = 1$ and $z = 4$, find the value of $2yz + 8$

$$16$$

22. [Equations] *

$$2 \times (18 - \underline{13}) = 10$$

MATH'S MATE



Term 4 - Sheet 4

Name:

Due Date: / /

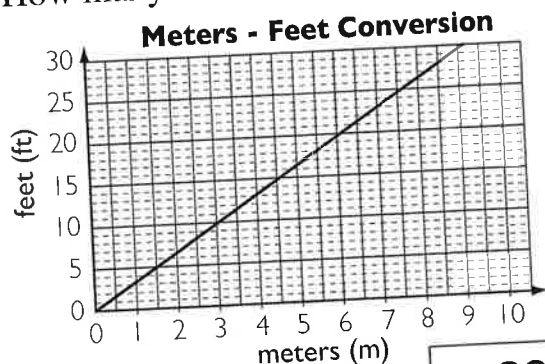
Parent's Signature:

QUOTE OF THE WEEK

Never cut what you can untie.
Joseph Joubert

23. [Graphs & Functions]

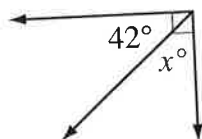
How many feet are equivalent to 7 m?



23 ft

24. [Shapes] *

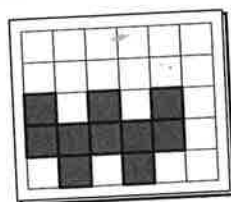
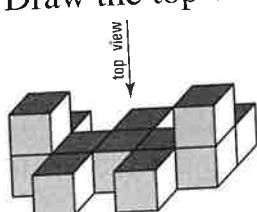
Find the value of x° .



48°

25. [Exploring Geometry]

Draw the top view of this solid.

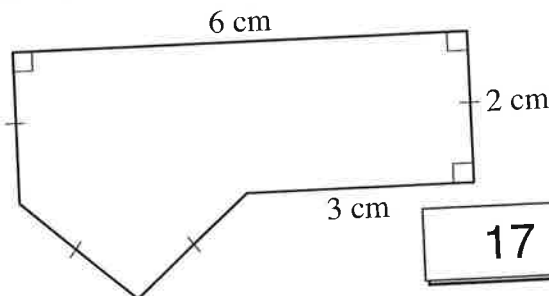


26. [Units of Measurement / Time] *

$$3\frac{1}{6}h = 190 \text{ min}$$

27. [Perimeter] *

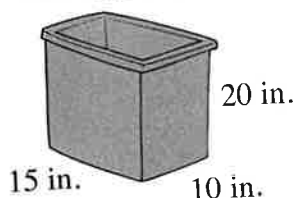
Calculate the perimeter of this shape.



17 cm

28. [Area / Volume] *

Using $V = lwh$ find the volume of the trash can that is a rectangular prism.

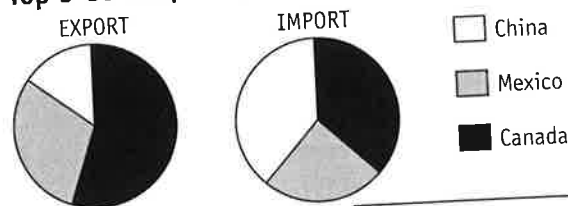


3000 in.³

29. [Statistics]

To which country does the USA export less than it imports?

Top 3 USA export destinations & import sources



China

30. [Probability] *

Which has a 50% chance of success?

- A) drawing a vowel from letters A to Z
- B) selecting an even number from a list of numbers 10 to 19
- C) choosing a diamond from a deck of 52 playing cards

B

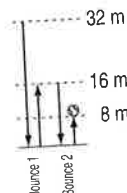
31. [Problem Solving 1] *

In a fish bowl there were 12 fish, some little, others big. If each of the big fish ate 2 little fish and then the little fish were all gone, how many fish were left in the bowl?

4

32. [Problem Solving 2] *

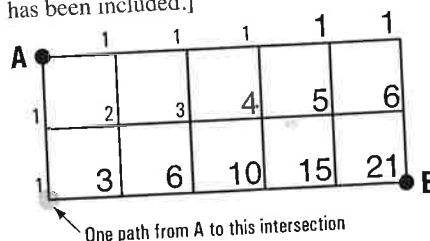
A ball is dropped from a height of 32 m. With each bounce, the ball reaches a height that is half the height of the previous bounce. After which bounce will the ball rebound to a maximum height of 25 cm?



7th

33. [Problem Solving 3] *

You are to go from A to B, always moving right or down along the lines. On how many different paths can you go? [The number of paths from A to various intersections has been included.]



21

1. [+ Whole Numbers to 10]

	55	8	17	16	9	23	14	2	60	21
+ 6	61	14	23	22	15	29	20	8	66	27

2. [- Whole Numbers to 10]

	15	82	9	50	21	6	68	77	14	43
- 4	11	78	5	46	17	2	64	73	10	39

3. [× Whole Numbers to 12]

	3	12	8	6	11	7	10	9	4	5
× 9	27	108	72	54	99	63	90	81	36	45

4. [+ Whole Numbers to 12]

	66	88	33	110	132	55	44	121	77	99
÷ 11	6	8	3	10	12	5	4	11	7	9

5. [Large Number +, -]

$$\begin{array}{r} 43,207 \\ + 8,057 \\ \hline \end{array}$$

51,264

6. [Large Number ×, ÷]

$$\begin{array}{r} 1356 \\ \times 14 \\ \hline \end{array}$$

5424

13,560

18,984

7. [Decimal +, -]

$$\begin{array}{r} 68.0 \\ - 0.6 \\ \hline \end{array}$$

67.4

8. [Decimal ×, ÷]

$$\begin{array}{r} 0.6 \\ \times 0.4 \\ \hline \end{array}$$

0.24

9. [Fraction +, -] *

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

 $\frac{1}{3}$

10. [Fraction ×, ÷] *

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

 $\frac{3}{4}$

11. [Percents] *

If a \$200 pair of shoes is reduced by 15%, what is the discount?

\$30

12. [Decimals / Fractions / Percents] *

Complete the table:

Decimal	Fraction	Percent
0.9	$\frac{9}{10}$	90%

13. [Integers]

$$2 - 5 =$$

-3

14. [Rates / Ratios] *

The average turtle swims at 12 mph and walks at 3 mph. Find the ratio of swimming to walking rates.

4:1

15. [Exponents / Square Roots]

$$1^5 =$$

1

16. [Order of Operations] *

$$5 + 3^2 \times 3 =$$

32

17. [Exploring Number]

Choose the whole numbers from this list:

 $\frac{3}{5}$, 61, -3, 127, 0.75

61, 127

18. [Multiples / Factors / Primes]

List the prime factors of 35.

5, 7

19. [Number Patterns]

Complete the pattern:

-14, -12, -10, -8, -6, -4

20. [Expressions]

Simplify
 $a + a + b$

2a + b

21. [Substitution] *

If $h = 7$, find the value of h^2

49

22. [Equations] *

Solve for x :
 $x + 2 = 9$

x = 7

MATH'S MATE



Term 4 - Sheet 5

Name:

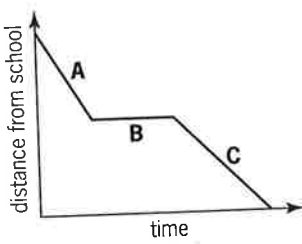
Due Date: / /

Parent's Signature:

QUOTE OF THE WEEK

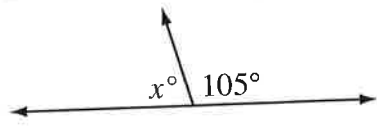
Cigarettes are killers that travel in packs.
Mary Ott

23. [Graphs & Functions]
This graph shows Claire's journey as she walks from home to school. Where is Claire at the end of section C?



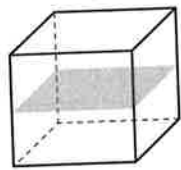
school

24. [Shapes] *
Find the value of x° .



75°

25. [Exploring Geometry]
What shape is the cross section drawn through this cube?

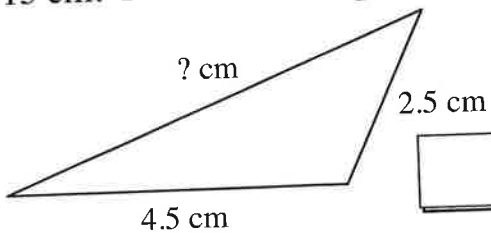


square

26. [Units of Measurement / Time] *
Find the time in hours and minutes between 8:00 A.M. and 2:15 P.M. on the same day.

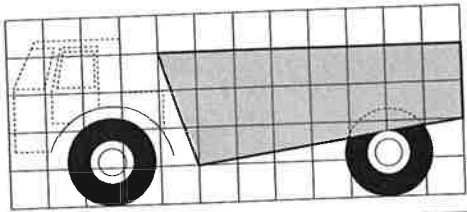
6 h 15 min

27. [Perimeter] *
The perimeter of the scalene triangle is 13 cm. Find the missing side length.



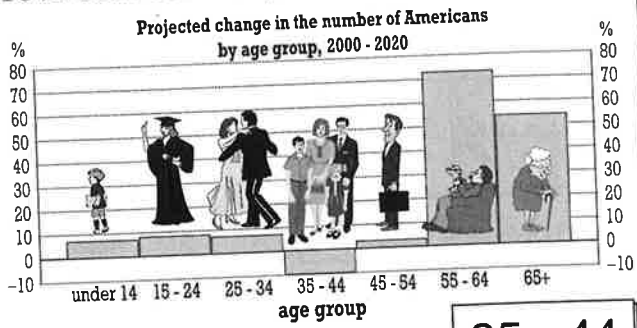
6 cm

28. [Area / Volume] *
Find the area of the shaded quadrilateral.



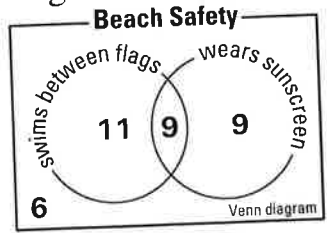
19 sq. units

29. [Statistics]
Which age group is expected to fall by 10% between the year 2000 and 2020?



35 - 44

30. [Probability] *
What is the probability that a person chosen at random swims between the flags?



4/7

31. [Problem Solving 1] *
A number of students are standing in a circle. They are evenly spaced and the fifth student is directly opposite the eleventh student. How many students are there all together?

12

32. [Problem Solving 2] *
A 2-digit number with 2 different digits has a special property:
"When the sum of its digits is added to the product of its digits, the result is the number itself."
What is the smallest number with this property?

19

33. [Problem Solving 3] *
Angela had a pair of cats. The female gave birth to six kittens, three male and three female. The next year the four female cats each gave birth to six kittens, again, three male and three female. If, in the next year, each female does the same and no cats die, how many cats will Angela then have?

128

MATH'S MATE

Term 4 - Sheet 6

Name:

Due Date: / /

Parent's Signature:

QUOTE OF THE WEEK

It is a good thing to learn caution by the misfortunes of others.
Syrus

1. [+ Whole Numbers to 10]

	20	25	7	74	13	6	62	18	41	89
+ 8	28	33	15	82	21	14	70	26	49	97

2. [- Whole Numbers to 10]

	16	21	30	9	15	78	83	12	14	27
- 7	9	14	23	2	8	71	76	5	7	20

3. [× Whole Numbers to 12]

	5	4	8	9	6	12	3	7	11	10
× 5	25	20	40	45	30	60	15	35	55	50

4. [÷ Whole Numbers to 12]

	60	48	132	84	72	120	96	36	24	108
÷ 12	5	4	11	7	6	10	8	3	2	9

5. [Large Number +, -]

$$\begin{array}{r} 7\ 3,8\ 4\ 5 \\ +\ 2\ 9\ 5\ 6 \\ \hline \end{array}$$

76,801

6. [Large Number ×, ÷]

$$\begin{array}{r} 2\ 3\ 0\ 8 \\ \times\ 1\ 5 \\ \hline \end{array}$$

11,540

23,080

34,620

7. [Decimal +, -]

$$\begin{array}{r} 3.0 \\ -\ 0.0\ 5 \\ \hline \end{array}$$

2.95

8. [Decimal ×, ÷]

$$\begin{array}{r} 0.2 \\ \times\ 0.5 \\ \hline \end{array}$$

0.10

9. [Fraction +, -] *

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

10. [Fraction ×, ÷] *

$$\frac{1}{8} \div \frac{4}{9} =$$

 $\frac{9}{32}$

11. [Percents] *

If a \$900 plasma screen TV is reduced by 25%, what is the discount?

\$225

12. [Decimals / Fractions / Percents] *

Complete the table:

Decimal	Fraction	Percent
0.1	$\frac{1}{10}$	10%

13. [Integers]

$$4 - 9 =$$

-5

14. [Rates / Ratios] *

A submarine's surface speed is 12 knots, and its diving speed is 20 knots. Find the ratio of diving to surface rates.

5:3

15. [Exponents / Square Roots] *

$$4^3 =$$

64

16. [Order of Operations] *

$$26 - 6 \times 2^2 =$$

2

17. [Exploring Number]

Choose the whole numbers from this list:

$$7.43, -\frac{8}{3}, 1, 225, \sqrt{5}$$

1, 225

18. [Multiples / Factors / Primes]

List the prime factors of 12.

2, 3

19. [Number Patterns]

Complete the pattern:

$$11, 8, 5, 2, -1, \underline{-4}, \underline{-7}$$

20. [Expressions]

Simplify
 $s + t + s$

2s + t

21. [Substitution] *

If $s = 3$, find the value of $3s^2$

27




22. [Equations] *

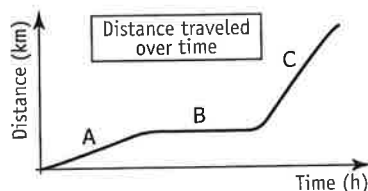
Solve for b :
 $b - 4 = 5$

b = 9

23. [Graphs & Functions]

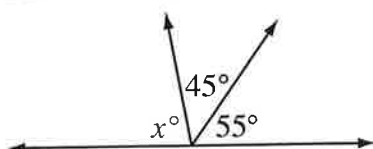
The graph of a trip is shown below. It is divided into 3 parts. Match each part with its best description.

- A)  Stopped for lunch
 B)  Driving on a dirt road
 C)  Driving on a freeway



24. [Shapes] *

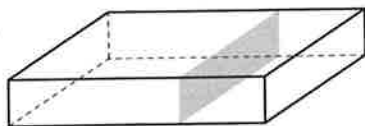
Find the value of x° .



80°

25. [Exploring Geometry]

What shape is the cross section drawn through this prism?



rectangle

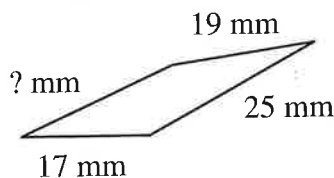
26. [Units of Measurement / Time] *

Find the time in hours and minutes between 5:30 A.M. and 3:00 P.M. on the same day.

9 h 30 min

27. [Perimeter] *

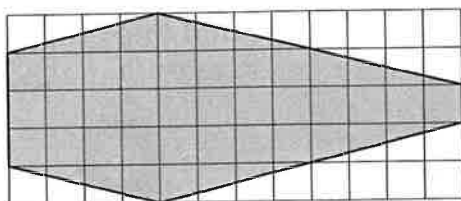
The perimeter of the quadrilateral is 83 mm. Find the missing side length.



22 mm

28. [Area / Volume] *

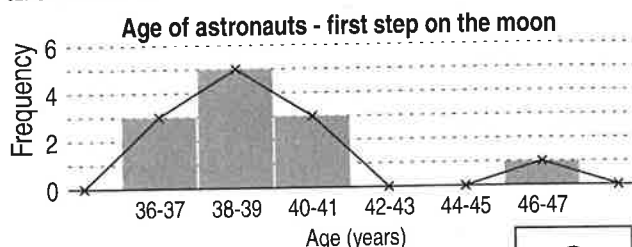
Find the area of the shaded polygon.



40 sq. units

29. [Statistics]

How many astronauts were less than 40 years old when they first stepped on the moon?



8

30. [Probability] *

What is the probability that a person chosen at random prefers snowboarding?



or 0.16

$\frac{1}{6}$

31. [Problem Solving 1] *

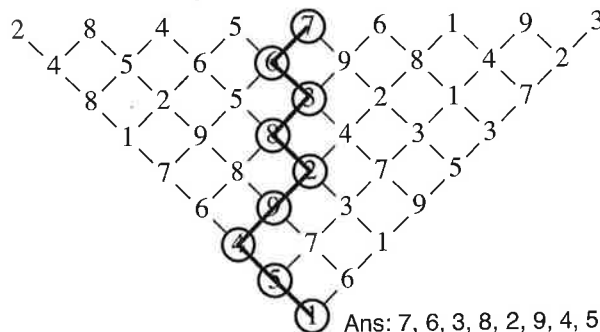
How many of the first ten positive whole numbers can be expressed as the sum of two different prime numbers?

5, 7, 8, 9, 10

5

32. [Problem Solving 2]

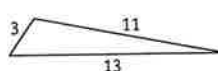
Starting at the top and finishing at the bottom of this network, trace a path which goes through each number from 1 to 9 once and only once. [The order is not relevant.]



Ans: 7, 6, 3, 8, 2, 9, 4, 5, 1

33. [Problem Solving 3] *

Nick has six sticks of the following lengths: 3 cm, 3 cm, 5 cm, 9 cm, 11 cm and 13 cm. How many different triangles can he make using three of these sticks?



{3, 11, 13} possible triangle



{1, 3, 5} impossible triangle

7

MATH'S MATE

Term 4 - Sheet 7

Name:

Due Date:/...../.....

Parent's Signature:

QUOTE OF THE WEEK

It is when we forget ourselves that we do things that are most likely to be remembered.

1. [+ Whole Numbers to 10]

	11	54	6	19	32	45	8	17	63	10
+ 7	18	61	13	26	39	52	15	24	70	17

2. [- Whole Numbers to 10]

	15	97	20	12	53	19	61	14	16	28
- 9	6	88	11	3	44	10	52	5	7	19

3. [x Whole Numbers to 12]

	11	12	5	10	7	9	3	6	8	4
x 8	88	96	40	80	56	72	24	48	64	32

4. [+ Whole Numbers to 12]

	24	42	18	48	66	72	60	36	30	54
÷ 6	4	7	3	8	11	12	10	6	5	9

5. [Large Number +, -]

$$\begin{array}{r} 51,632 \\ + 7,578 \\ \hline \end{array}$$

59,210

6. [Large Number x, ÷]

$$\begin{array}{r} 3022 \\ \times 19 \\ \hline \end{array}$$

27,198**30,220****57,418**

7. [Decimal +, -]

$$\begin{array}{r} 9 \\ - 0.04 \\ \hline \end{array}$$

8.96

8. [Decimal x, ÷]

$$\begin{array}{r} 0.3 \\ \times 0.8 \\ \hline \end{array}$$

0.24

9. [Fraction +, -] *

$$\frac{8}{15} + \frac{3}{5} =$$

 $1\frac{2}{15}$

10. [Fraction x, ÷] *

$$\frac{3}{5} \div \frac{1}{2} =$$

 $1\frac{1}{5}$

11. [Percents] *

If an \$80 sweater is reduced by 60%, what is the sale price?

\$32

12. [Decimals / Fractions / Percents]

Complete the table:

Decimal	Fraction	Percent
0.15	$\frac{15}{100} = \frac{3}{20}$	15%

17. [Exploring Number]

Choose the integers from this list:

 $\frac{7}{9}$, 184, -20, 3.14, 630**184, -20, 630**

18. [Multiples / Factors / Primes]

List the prime factors of 30.

2, 3, 5

19. [Number Patterns]

Complete the pattern:

-25, -20, -15, -10, **-5, 0**

13. [Integers]

$$-2 + 9 =$$

7

14. [Rates / Ratios] *

China issued the largest stamp ever, 210 mm long and 65 mm wide. Find the ratio of length to width.

42:13

20. [Expressions]

Simplify $e + f + f + e + f$ **$2e + 3f$**

21. [Substitution] *

If $v = 2$, find the value of $13 - v^2$ **9**

15. [Exponents / Square Roots] *

$$3^3 =$$

27

22. [Equations] *

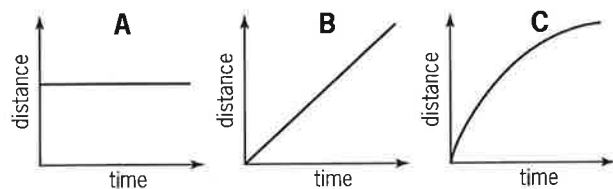
Solve for m :

$$7 + m = 15$$

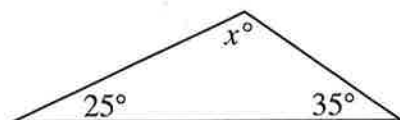
 $m = 8$

23. [Graphs & Functions]

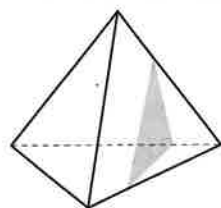
Alex cycles at a constant rate. Which graph shows this?

**B****24.** [Shapes] *

Find the value of x° .

**120°****25.** [Exploring Geometry]

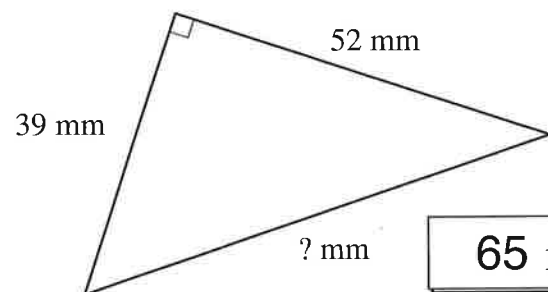
What shape is the cross section drawn through this pyramid?

**triangle****26.** [Units of Measurement / Time] *

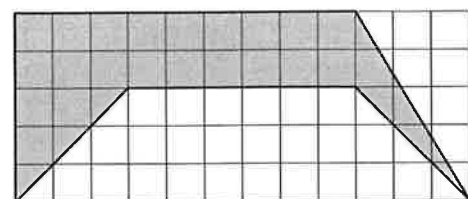
Find the time in hours and minutes between 22:30 and 04:20 the next day.

5 h 50 min**27.** [Perimeter] *

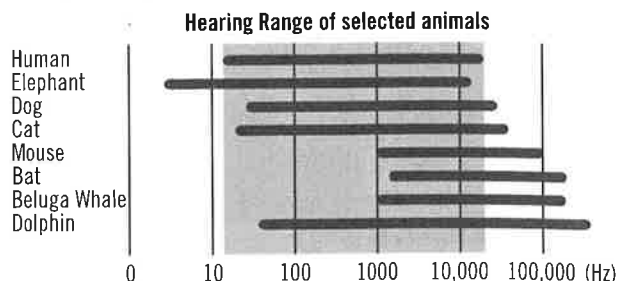
The perimeter of the right triangle is 156 mm. Find the missing side length.

**65 mm****28.** [Area / Volume] *

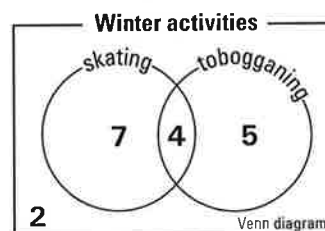
Find the area of the shaded polygon.

**25.5 sq. units****29.** [Statistics]

Which animal can hear sounds with a frequency of less than 10 Hz?

**elephant****30.** [Probability] *

What is the probability that a person chosen at random prefers both skating and tobogganing?



or 0.2 $\frac{2}{9}$

31. [Problem Solving 1] *

A bottle of soft drink is two thirds full. One quarter of the drink is consumed. How full is the bottle now?

half full**32.** [Problem Solving 2] *

Genevieve forgot the last two digits of her four-digit locker code:

21??

If the number is divisible by 5, by 6 and by 7, what is Genevieve's locker code?

2100**33.** [Problem Solving 3] *

Each of the letters below represents a different digit.

If $EAT = 721$,
what does **TURKEY** represent?

									A
			M	E	R	R	Y		
+			X	M	A	S			
			T	U	R	K	E	Y	

TURKEY = 104,375

1. [+ Whole Numbers to 10]

	12	14	17	30	75	28	41	79	13	6
+ 9	21	23	26	39	84	37	50	88	22	15

2. [- Whole Numbers to 10]

	18	22	16	39	5	27	14	3	20	11
- 3	15	19	13	36	2	24	11	0	17	8

3. [× Whole Numbers to 12]

	3	8	11	7	10	12	9	4	6	5
× 12	36	96	132	84	120	144	108	48	72	60

4. [÷ Whole Numbers to 12]

	28	77	56	35	49	21	63	42	84	70
÷ 7	4	11	8	5	7	3	9	6	12	10

5. [Large Number +, -]

$$\begin{array}{r} 69,780 \\ + 2453 \\ \hline \end{array}$$

72,233

6. [Large Number ×, ÷]

$$\begin{array}{r} 4203 \\ \times 37 \\ \hline 29421 \\ 126090 \\ \hline 155511 \end{array}$$

7. [Decimal +, -]

$$\begin{array}{r} 51 \\ - 0.07 \\ \hline 50.93 \end{array}$$

8. [Decimal ×, ÷]

$$\begin{array}{r} 0.9 \\ \times 0.4 \\ \hline 0.36 \end{array}$$

9. [Fraction +, -] *

$$\frac{7}{10} - \frac{9}{20} = \frac{1}{4}$$

10. [Fraction ×, ÷] *

$$\frac{2}{5} \div \frac{1}{4} =$$

1 $\frac{3}{5}$

11. [Percents] *

If an \$8000 diamond ring is discounted by 40%, what is the sale price?

\$4800

12. [Decimals / Fractions / Percents]

Complete the table:

Decimal	Fraction	Percent
0.6	$\frac{6}{10} = \frac{3}{5}$	60%

13. [Integers]

$$-9 + 6 =$$

-3

14. [Rates / Ratios] *

The Singapore Flyer observation wheel has a height of 16,500 cm and a diameter of 150 m. Find the ratio of diameter to height.

10:11

15. [Exponents / Square Roots] *

$$6^3 =$$

216

16. [Order of Operations] *

$$4 \times (8 - 3)^2 =$$

100

17. [Exploring Number]

Choose the integers from this list:

8.4, -12, 17, $\frac{2}{4}$, 100

-12, 17, 100

18. [Multiples / Factors / Primes]

List the prime factors of 42.

2, 3, 7

19. [Number Patterns]

Complete the pattern:

13, 9, 5, 1,

-3, -7

20. [Expressions]

Simplify
 $h + g + h + g$

2g + 2h

21. [Substitution] *

If $e = 5$, find the value of $2e^2 - 12$

38

22. [Equations] *

Solve for v:
 $20 - v = 6$

v = 14

MATH'S MATE



Term 4 - Sheet 8

Name:

Due Date: / /

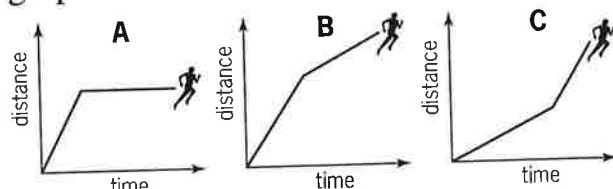
Parent's Signature:

QUOTE OF THE WEEK

Nowadays, when buying a present, it's hard to find something that looks like it cost as much as it did.
W. P. G.

23. [Graphs & Functions]

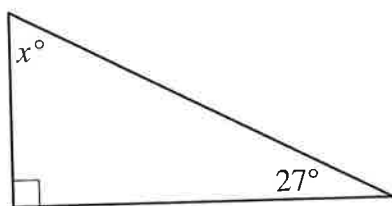
Rita jogs at a constant speed and then sprints across an intersection. Which graph shows this?



C

24. [Shapes] *

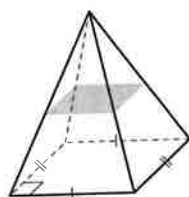
Find the value of x° .



63°

25. [Exploring Geometry]

What shape is the cross section drawn through this pyramid?



rectangle

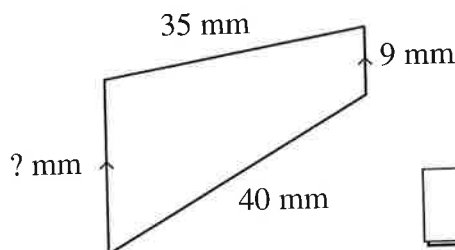
26. [Units of Measurement / Time] *

Find the time in hours and minutes between 02:25 and 15:50 on the same day.

13 h 25 min

27. [Perimeter] *

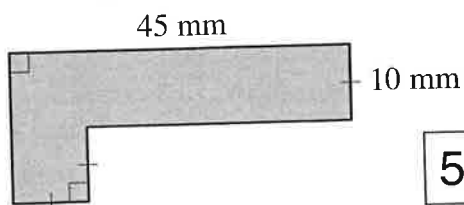
The perimeter of the trapezoid is 107 mm. Find the missing side length.



23 mm

28. [Area / Volume] *

Find the area of the polygon.

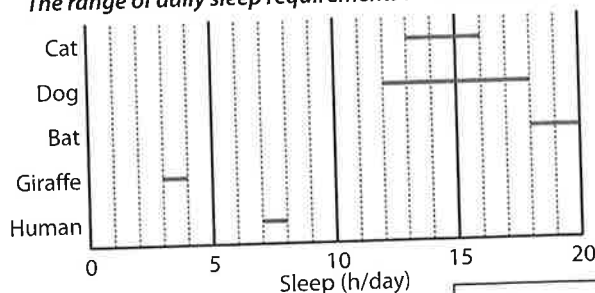


550 mm²

29. [Statistics]

Which animal sleeps the most hours each day?

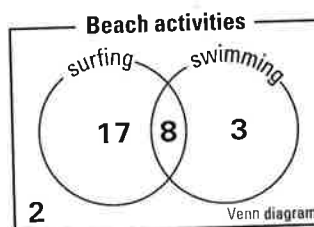
The range of daily sleep requirements for selected animals



bat

30. [Probability] *

What is the probability that a person chosen at random went surfing?

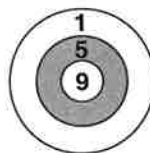


or 0.83

5/6

31. [Problem Solving 1] *

Four darts are thrown at the target. If each dart lands on the target, how many different point totals are possible?



The only possible targets are multiples of 4 from 4 to 36.

9

32. [Problem Solving 2] *

What single discount is equivalent to successive discounts of 10% and 20%?

28%

33. [Problem Solving 3] *

Pierre de Fermat, a 17th century French lawyer, stated that any whole number can be written as the sum of four or less square numbers. For example:

$$15 = 3^2 + 2^2 + 1^2 + 1^2$$

Express 95 as such a sum. [or $7^2 + 6^2 + 3^2 + 1^2$ or $6^2 + 5^2 + 5^2 + 3^2$]

$$95 = 9^2 + 3^2 + 2^2 + 1^2$$