

Review Short Answer

1 Camille and Zoe are security guards. Zoe's shift is 4 hours less than double Camille's shift.

Given this situation, complete the following table of values.

Camille's hours	5	?	8	?
Zoe's hours	?	7	?	16

Camille's hours	5		8	
Zoe's hours		7		16

2 Simplify the following expressions :

a) $12.2y + 4 - 3y - 6.25y - 8$

b) $(6(x + 1) + 3x - 3) \div 3$

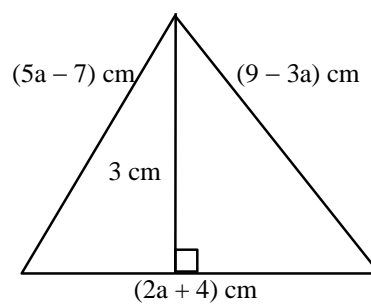
a) _____

b) _____

3

Given the triangle illustrated at the right.

The length of each side is represented by an algebraic expression.



a) To calculate the perimeter of the triangle, do the following :

$$5a - 7 + 9 - 3a + 2a + 4$$

b) To calculate the area of the triangle, do the following :

$$3(2a + 4) \div 2$$

a) The perimeter of the triangle is _____ cm long.

b) The area of the triangle is _____ cm².

4

Solve the following equation :

$$6x + x + 4 = 2x + 16$$

In this equation, x is equal to _____.

5 There are 3 members in the Swanson family – Father, Mother and daughter Lynn.

Father is 5 years older than Mother. Lynn is 23 years younger than her father. The sum of their ages is 110 years.

If x is Mother's age, write the equation that represents this situation.

The equation representing this situation is :

6 Find the value of x in each of the following equations .

a) $3(x - 15) = 6x + 3$

b) $\frac{2x}{5} = 10$

a) _____

b) _____

7 Simplify the following expressions .

a) $2x + 3 + 2(4x - 5)$

b) $(9x - 8) - (6x - 4)$

c) $-6(5 - 4x)$

d) $(15x - 3) \div 3$

a) _____

b) _____

c) _____

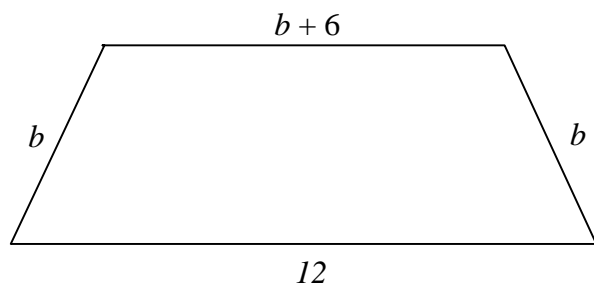
d) _____

8 Write an equation you can use to represent the following situation.

"Three times the sum of a certain number and 5 is equal to twice the number minus 4".

9

Given the following figure :



What algebraic expression represents the perimeter of this quadrilateral?

The algebraic expression for the perimeter of the quadrilateral is _____.

10

Find the value of x that makes the following equation true in \mathbb{Q} .

$$\frac{x}{3} + 12 = 7$$

$x =$ _____

11

If I add 5 years to twice my brother's age, I get triple his age less 10 years.

Using x to represent my brother's age, write an equation to represent this situation.

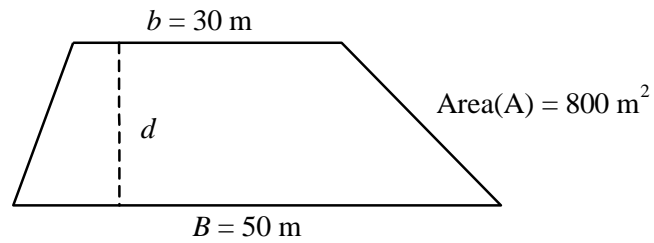
The equation is _____.

12 Solve the following equation :

$$0.5m - 9.2 = 8.6$$

The value of m is _____.

13 The diagram below represents a piece of land that the owner wants to sell.



He uses the following formula to calculate the depth d of the land :

$$A = \frac{(B + b)d}{2}$$

What is the depth d of the land?

The depth d of the land is _____ m.

14 Simplify the following :

$$4(2x + 3) - 1 = 7$$

- 15 Gina has x dollars. Her brother John has \$8 more than twice as much as she does. Together they have a total of \$47.

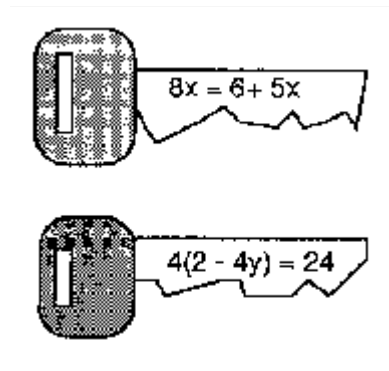
Write an equation to represent this situation.

The equation is _____.

- 16 At a Scout Camp, the scout master has organized a treasure hunt. Two keys must be used simultaneously to open the treasure chest.

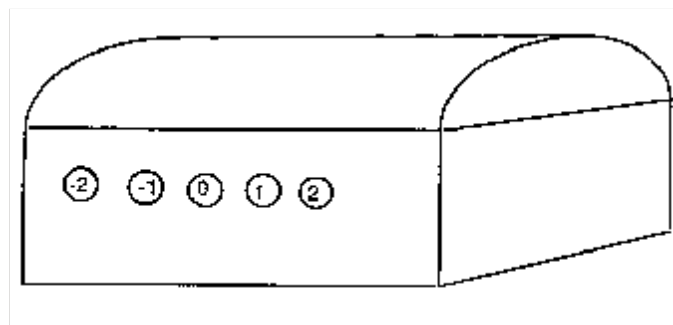
There is an equation written on each key. The solution to the equation indicates into which lock the key must be inserted.

The team "Sharp Eyes" has found these two keys :



In the answer booklet, blacken the locks into which the keys must be inserted.

Blacken the locks into which the keys must be inserted.



17

The sum of the ages of James and Samantha is 40 years. Samantha is 4 years older than twice James' age.

If "x" represents James' age, write a first degree equation in one variable to represent this situation.

The equation is _____.

18

Simplify the following algebraic expression:

$$-2(x + 2) - (x - 2)$$

The simplified expression is: _____.

19

Solve the following equation :

$$x - 10 = 3x = 20$$

20

Jennifer and Jerry went on a bike trip together. Jerry rode 3 km more than twice the distance that Jennifer rode.

In your answer booklet, complete the table of values that represents the distance covered by each cyclist.

Distance covered by Jennifer (km)	2	?	?	11
Distance covered by Jerry (km)	?	11	17	?

Distance covered by Jennifer (km)	2			11
Distance covered by Jerry (km)		11	17	

21

Simplify the following algebraic expressions:

a) $3x + 5y - x + 2 + 2x - 4y + 6$

b) $(3x - 4) - (4x - 8)$

c) $\frac{3x + 6y - 12}{3}$

d) $2x - 3 + 2(5x - 8)$

a) _____

b) _____

c) _____

d) _____

22 Simplify the following algebraic expressions:

a) $\frac{3x - 3}{3} - x$

b) $2(x + 2) + 3x - 5$

a) _____

b) _____

23 Simplify the following algebraic expressions :

a) $3(5x + 7) - 4(x - 2)$

b) $(9x + 18) \div 3$

a) _____

b) _____

24 What is the value of x in each of the following equations?

a) $2(3x - 2) - 8 = -2x + 4$

b) $\frac{6x - 4}{2} = 5x - 9$

a) $x = \underline{\hspace{2cm}}$

b) $x = \underline{\hspace{2cm}}$

25 Post Cereals produce regular Cheerios and Honey Nut Cheerios.

The number of boxes of regular Cheerios produced is always 20 less than 3 times the number of boxes of Honey Nut Cheerios.

Fill in the missing values in the following table of values.

Number of boxes of Honey Nut Cheerios	50		...	n
Number of boxes of regular Cheerios		196	...	

Number of boxes of Honey Nut Cheerios	50		...	n
Number of boxes of regular Cheerios		196	...	

26

Simplify the following algebraic expression.

a) $\frac{(8x + 16)}{4} - 3(x - 5)$

Solve the following equation.

b) $2(5x - 1) = 3 - 5(2 - x)$

27

a) Simplify the following expression:

$$3(4x + 2) - (2x + 7)$$

Show your work.

b) Solve the following equation to find the value of x :

$$5x + 4 - 8x = 7x - 12$$

Show your work.

a) _____

b) _____

28

a) Solve: $3(2x) + 5 - x = 2x + 17$

b) Solve: $\frac{x - 12}{2} = \frac{x}{3}$

29

Simplify the following algebraic expression.

a) $2(4x - 7) - (5 - 3x)$

Solve the following equation.

b) $2(x + 3) = 10 - (x - 5)$

a) _____

b) _____

30

Simplify the following expression :

$$2x + 3x + x - 5x - -2x + 3x$$
