Name: _____ Period: _____ Date: _____

Writing and Evaluating Expressions Assignment

Write an algebraic expression for the word expression.

1. The quotient of y and 14

2. The sum of 15 and the product of 5 and z

3. Twice a number increased by 13.

4. The sum of 7 and the product of 2 and x

5. 16 decreased by x

6. A number x divided by 4

Write the word expression for each algebraic expression.

7. $x - 6$

8. $c - 4$

9. $k^3 + 5$

10. $3k^2$

11. $2a + 6$

12. $\frac{x+4}{3}$ or $(x+4) \div 3$

Write an expression to match the words.

13. Alan had 9 fish and bought some more.

14. Represent the total number of calories in x peanuts and y potato chips if each peanut contains 5 calories and each potato chip contains 10 calories.

15. Karen spent \$300 on jacket and jeans. If she spent y dollars for the jacket, represent the amount she spent for the jeans.

16. If a plane travel 600 kilometers per hour, represent the distance it will travel in k hours.

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Writing and Evaluating Expressions Assignment

Use a bar model to represent each expression.

17. $x + 5$

18. $\frac{y}{4}$

Evaluate each expression for the given values of the variable.

19. $65 - (x - y) =$

$x = 25 \qquad y = 12$

20. $5k + j^2(72 - 3k) =$

$k = 15 \qquad y = 10$

21. $\frac{\boldsymbol{2x + 3y}}{\boldsymbol{10}} - (\boldsymbol{4x - 3y}) =$

$\boldsymbol{x = 15} \qquad \boldsymbol{y = 10}$

22. $\boldsymbol{3a + 4b - (a + b)^2 =}$

$\boldsymbol{a = 10} \qquad \boldsymbol{b = 6}$

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Writing and Evaluating Expressions Assignment

ANSWERS

Write an algebraic expression for the word expression.

1. The quotient of y and 14

$\frac{y}{14}$ *or* $y \div 14$

2. The sum of 15 and the product of 5 and z

$15 + 5z$

3. Twice a number increased by 13.

$2h + 13$

4. The sum of 7 and the product of 2 and x

$7 + 2x$

5. 16 decreased by x

$16 - x$

6. A number x divided by 4

$\frac{x}{4}$ *or* $x \div 4$

Write the word expression for each algebraic expression.

7. $x - 6$

The difference of a number x and 6

8. $c - 4$

A number c take away 4

9. $k^3 + 5$

k cubed increased by 5

10. $3k^2$

3 times k squared

11. $2a + 6$

6 more than the product 2 times a

12. $\frac{x+4}{3}$ *or* $(x + 4) \div 3$

The sum of a number x and 4, all divided by 3

Write an expression to match the words.

13. Alan had 9 fish and bought some more.

$y - number\ of\ new\ fish$

$Total\ numbers\ of\ fish$ $9 + y$

14. Represent the total numbers of calories in x peanuts and y potato chips if each peanut contains 5 calories and each potato chip contains 10 calories.

$x - number\ of\ peanuts$
$y - number\ of\ potato\ chips$

$Total\ calories$ $5x + 10y$

15. Karen spent $300 for jacket and jeans. If she spent y dollars for the jacket, represent the amount she spent for the jeans.

$y - dollars\ for\ jacket$

$Dollars\ for\ jeans$ $300 - y$

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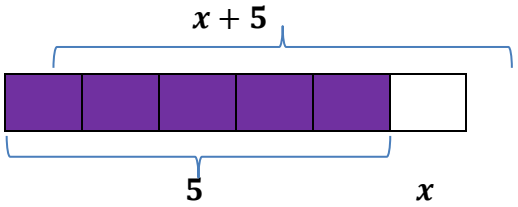
Writing and Evaluating Expressions Assignment

16. If a plane travel 600 kilometers per hour, $k = travelling\ time(h)$ represent the distance it will travel in k hours.

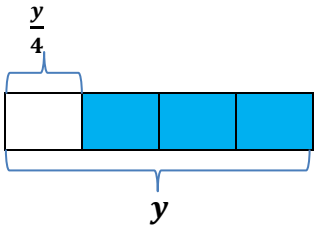
$Distance\ (km)$ $600 * k$

Use a bar model to represent each expression.

17. $x + 5$



18. $\frac{y}{4}$



Evaluate each expression for the given values of the variable.

19. $65 - (x - y) =$

$x = 25$ $y = 12$

$65 - (x - y) =$
$= 65 - (25 - 12) =$
$= 65 - 13 =$
$= 52$

20. $5k + j^2(72 - 3k) =$

$k = 15$ $y = 10$

$5k + j^2(72 - 3k) =$
$= 5 * 15 + 10^2(72 - 3 * 15) =$
$= 75 + 100 * (72 - 45) =$
$= 75 + 100 * 27 =$
$= 75 + 2,700 =$
$= 2,775$

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Writing and Evaluating Expressions Assignment

21. $\frac{2x+3y}{10} - (4x-3y) =$

$x = 15 \qquad y = 10$

$$\frac{2x+3y}{10} - (4x-3y) =$$
$$= \frac{2*15+3*10}{10} - (4*15-3*10) =$$
$$= \frac{30+30}{10} - (60-30) =$$
$$= \frac{60}{10} - 30 =$$
$$= 6 - 30 =$$
$$= -24$$

22. $3a + 4b - (a+b)^2 =$

$a = 10 \qquad b = 6$

$$3a + 4b - (a+b)^2 =$$
$$= 3*10 + 4*6 - (10+6)^2 =$$
$$= 30 + 24 - (16)^2 =$$
$$= 30 + 24 - 256 =$$
$$= 54 - 256 =$$
$$= -202$$