

Name _____

1 If $5x + 8 = 10$ for some value of x , then what is the value of $10x + 16$ for the same value of x ? Explain how you arrived at your answer.

2 Write the following expression in simplest binomial form.

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

3 What property is illustrated in the identity shown below?

$$6x + (2 + 3) = (6x + 2) + 3$$

4 What property is illustrated in the identity shown below?

$$2(3x + 1) = 6x + 2$$

5 If the expression $\frac{2x}{a} + b = c$ is solved for x in terms of a , b , and c , then $x =$

- (1) $\frac{ac - ab}{2}$ (3) $\frac{ac - b}{2}$
 (2) $\frac{b + c}{2a}$ (4) $\frac{ab + c}{2}$

6 Which of the following is equivalent to $(x + 5)^2$?

- (1) $x^2 + 10x + 25$ (3) $2x + 25$
 (2) $x^2 + 25$ (4) $2x + 10$

7 Which of the following is equivalent to the expression $\frac{8x + 30}{10}$?

- (1) $8x + 3$ (3) $8x + 20$
 (2) $\frac{4}{5}x + 3$ (4) $\frac{4}{5}x + 30$

8 When $3(2x - 5)$ is added to $2(4 - x)$ the result is

- (1) $8x + 2$ (3) $4x - 7$
 (2) $5x + 3$ (4) $2x - 11$

9 If Mark's age is represented by m and Hatchi's age is represented by h then which of the following expressions represents five less than half the sum of Mark and Hatchi's ages?

- (1) $5 - m + \frac{h}{2}$ (3) $5 - m - \frac{h}{2}$
 (2) $m + \frac{h}{2} - 5$ (4) $\frac{m + h}{2} - 5$

monday

tuesday

Henderson – Regents Review 5

Name _____

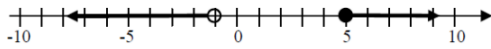
- 10** Francisco is three years more than twice Jenna's age. Harrison is two years less than three times Jenna's age. If Jenna's age is given by a , then write an expression for Francisco's age, Harrison's age, and the sum of all three ages, in terms of a .

Francisco's Age:

Harrison's Age:

Sum of All Three Ages:

- 11** Which of the following compound inequalities is shown graphed below?



- (1) $-1 \leq x < 5$ (3) $x < -1$ or $x \geq 5$
 (2) $-1 < x \leq 5$ (4) $x \leq -1$ or $x > 5$
- 12** Which of the following intervals is equivalent to the statement $-3 < x \leq 9$?
- (1) $(-3, 9]$ (3) $(-3, 9)$
 (2) $[-3, 9)$ (4) $[-3, 9]$

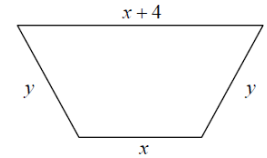
- 13** Two consecutive even integers have the following property. When the smaller integer is added to three times the larger integer, the result is two less than five times the smaller integer. Rafael tries to model this scenario with the equation show below.

$$n + 3n + 2 = 5n - 2$$

Unfortunately, Rafael has made an error on the left side of the equation. Explain what error he made.

Write the correct equation (if you haven't already) and solve it to find the two consecutive even integers.

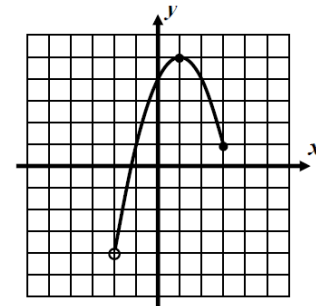
- 14** The trapezoid below has legs with lengths y feet and one base that is four feet longer than the other base, x . The perimeter of this trapezoid is given by $P = 2x + 2y + 4$. Solve this equation for the leg length, y .



If the perimeter of the figure is 26 feet and the shorter base, x , is 8 feet, then find the length of the leg, y .

- 15** If $f(x) = -2x^2 + 3$ then $f(-3) =$
- (1) -15 (3) 39
 (2) 21 (4) -18

- 16** Which of the following represents the range of the function shown in the graph below?



- (1) $(-4, 5]$
 (2) $[-4, 5)$
 (3) $[-2, 3]$
 (4) $(-2, 3]$

wednesday

thursday