Name:

Date: _____

1. Select all the statements that are true. Be prepared to explain your reasoning.

a)
$$4 + -2(3 + 7) = 4 + -2 \cdot 3 + -2 \cdot 7$$

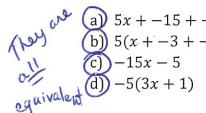
b) $4 + -2(3 + 7) = 4 - 2 \cdot 3 + 2 \cdot 7$
c) $4 + -2(3 + 7) = 4 - (2 \cdot 3 + 2 \cdot 7)$

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

$$4+-6+-14$$

$$-2+-14=(-16)$$

2. Select **all** expressions that are equivalent to 5x - 15 - 20x + 10.

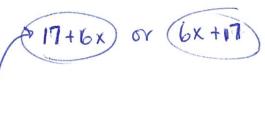


3. Simplify the expression. Show all work.

$$-7 + 6(x + 4) = -7 + (6x) + 6(4)$$

$$-7 + 6x + 24$$

$$-7 + 24 + 6x$$



4. Evaluate your answer from #3 when x = -2. Show all work.

$$17+6x$$
 $17+-12=5$
 $17+6(-2)$

5. Simplify the expression. Show all work.

$$2^{3} + 4(3+y) - 2.7y$$
 $8 + 4(3) + 4(y) + -2.7y$
 $20 + 123y$

6. Evaluate your answer from #5 when y = 0.8

$$20+1.39$$
 $30+1.04 = 21.04$

Name: _____

Date: _____

7. Simplify the expression. Show all work.

$$-2x + 5y + 3(x + -6) - 2y$$

$$-2x + 5y + 3(x) + 3(-6) + -2y$$

$$-2x + 5y + 3x + -18 + -2y$$

$$-2x + 3x + 5y + -2y + -18$$

8. Simplify the expression. Show all work.

$$\frac{1}{8}x - 2\frac{1}{4}y + 2(\frac{3}{8}x - \frac{1}{2}y)$$

$$\frac{1}{8}x + -2\frac{1}{4}y + 2(\frac{3}{8}x) - 2(\frac{1}{2}y)$$

$$\frac{1}{8}x + -2\frac{1}{4}y + \frac{6}{8}x + -1y$$

9. Factor the expressions.

$$\frac{6y - 14}{2} = \lambda(3y - 7)$$

$$3x + 5x = \chi(3 + 5) \text{ or } \chi(8) \text{ or } \xi\chi$$

10. Ms. Mule took her 3 kids to Six Flags Amusement Park. She bought 1 adult ticket, 3 child tickets, 2 sweatshirts for the girls, and a baseball hat for her son.

Write an expression to represent the total amount she spent if A represents the adult ticket price, C represents the child ticket price, W represents the price of a sweatshirt, and H represents the price of a hat.

Evaluate to find out how much Ms. Mule spent that day if

$$A = $55$$

$$C = $40.75$$

$$W = $20.25$$

$$H = $12.99$$

$$= 1A + 3C + 2W + 1H$$

$$= 1(55) + 3(40.75) + 2(20.25) + 1(12.99)$$

$$= 55 + 122.25 + 40.50 + 12.99$$

$$= 4230.74$$