

Name: Answers
Date: _____
Class: _____

Algebra
Unit 1
HW 1-5

1) Use the commutative property to rearrange the terms in this expression so that they are grouped by commonality, then simplify:

$$2x - 8 + 7x + 3 - 4x - 9$$

$$2x + 7x - 4x - 8 + 3 - 9$$

$$5x - 14$$

2) Using the associative property, rewrite this expressions so that like terms are grouped together:

$$7y - (4y - 8)$$

$$(7y - 4y) - 8$$

3) Using the Identity Property in this expression, multiply one of the terms by one so that they can be subtracted:

$$\frac{6}{5} - \frac{3}{1} \cdot \frac{5}{5}$$

$$\frac{6}{5} - \frac{15}{5}$$

4) Using the Identity Property, add in a positive seven to this expression, but also add in a 2nd term so you do not change the value of the expression.

$$7x + 6y - 9$$

$$7x + 6y - 9 + 7 - 7$$

5) Using the associative and commutative property, group all of the like terms together in this equation (show your steps and label the property you are using:

$$(7y - 4) + (6x - 3y) + (10 - 2x)$$

$$7y - 4 + 6x - 3y + 10 - 2x \text{ (Associative)}$$

$$7y - 3y - 4 + 10 + 6x - 2x \text{ (Commutative)}$$

$$(7y - 3y) + (-4 + 10) + (6x - 2x) \text{ (Associative)}$$

6) Evaluate: $5\frac{2}{3} - 6\frac{1}{4} + 10\frac{5}{9}$

$$9\frac{35}{36}$$

or

$$\frac{359}{36}$$

7) Evaluate when $x = -3$: $\frac{4x^2 - 2x - 4}{(x-2)^2}$

$$\frac{4(-3)^2 - 2(-3) - 4}{(-3-2)^2}$$

$$\frac{4(9) - 2(-3) - 4}{(-5)^2}$$

$$\frac{4(9) - 2(-3) - 4}{25}$$

$$\frac{36 + 6 - 4}{25}$$

$$\frac{38}{25} \text{ or } 1 \frac{13}{25}$$