

Name: Answers
 Date: _____
 Class: _____

Algebra
 Unit 1
 HW 1-6

1) Simplify: $2(2x - 4) + 3(6 - 4x)$
 $4x - 8 + 18 - 12x$
 $-8x + 10$

2) Simplify: $2x - 6(4 - 3x)$
 $2x - 24 + 18x$
 $20x - 24$

3) Simplify: $6x - 5 - (3x - \frac{7}{4})$
 $6x - 5 - 3x + \frac{7}{4}$
 $3x - \frac{13}{4}$

4) In each situation, determine what the value of q would need to be to make the equation true?

a) $q(7 - 3x) = 21 - 9x$

b) $10y + 20 = (4y + 8)q$

$21 \div 7 = 3$

$q = 3$

$3(7 - 3x) = 21 - 9x$

$21 - 9x = 21 - 9x \checkmark$

~~10y + 20 = (4y + 8)q~~ $20 \div 8 = 2.5$

$10y + 20 = (4y + 8)2.5$ $q = 2.5$

$10y + 20 = 10y + 20 \checkmark$

5) Evaluate: $|\frac{-5}{-9} - (2)(4.5) + \frac{-12}{5} - 2\frac{4}{7}|$

$|\frac{5}{9} - 9 + \frac{-12}{5} - 2\frac{4}{7}|$

$|\frac{-4226}{315}| = \frac{4226}{315}$

6) Simplify: $(x - 2)(4 - x)$

$4x - x^2 - 8 + 2x$
 $-x^2 + 6x - 8$

7) Simplify: $(x+5)^2$

$$(x+5)(x+5)$$

$$x^2 + 5x + 5x + 25$$

$$x^2 + 10x + 25$$

8) Two friends are saving money to buy a game together. Jimmy uses the equation $7w + 25$ to determine how much money he will have after w weeks. Sam uses the equation $5.5w + 20$ to determine how much money he will have after w weeks. Show how you would find an equation to determine how much they save combined after w weeks. Will they have \$125 after 5 weeks?

$$7w + 25 + 5.5w + 20$$

$$12.5w + 45$$

$$12.5(5) + 45$$

$$62.5 + 45$$

$$\$107.5 \text{ not enough (not } \$125)$$