

Name: _____
Date: _____
Class: _____

Algebra
Unit 2
PS

1) [2] Simplify: $4x - 2(3x + 4) - 6$

2) [3] Simplify: $6x(2 - 3x) - (4x + 6) + 12 - 8(x + 4)$

3) [3] Evaluate when $x = -3$: $\frac{2x^2 - 5x + 9}{4x - x(6x - 3)}$

4) [3] Is the following inequality true or false when $x = -\frac{7}{3}$?
 $4x - 7 > 10 - 2(x + 5)$

5) [4] Solve: $10x - 2(3 - 3x) - 14 = 8 + 4x - 5(3 - 2x)$

6) [3] $12 - 2(x + 4) = 2(10 + x) - 4x - 16$

7) [4] Two numbers are separated by 3. When you add these two numbers you get an answer that is the same as 3 more than twice the smaller number. What is the larger number?

8) [4] Ben ate 12 less cupcakes this week than George ate. Pam ate 4 more than twice as many cupcakes as Ben ate. When you add how many cupcakes Pam and George ate it is 5 less than 6 times as many as Ben ate. How many cupcakes did Pam eat?

9) [5] Sam has the same number of quarters and nickels. He has half as many dimes as quarters. When he counts how much money he has all together he has \$3.50. How much money does he have if he only counts the quarters?

10) [4] Solve and graph: $4x + 2(x + 10) < 45 + 4x$

11) [3] Solve and graph: $14 - x \leq 2x - 28$

12) [4] Solve for x: $5 + \frac{ax}{b} + c = d$

13) [4] Solve and graph: $-69 \leq 6 - 3(2x + 7) < 33$

14) [5] Tim and John are saving bottle caps for a fundraiser. John plans to save 7 less than twice as many as Tim. Together they must save at least 250 bottle caps to meet their goal. What is the least number of bottle caps John must save?