

Name: _____
Date: _____
Class: _____

Algebra
Unit 2
EC

To be eligible to receive extra credit on the unit test you must have a score below 75. To receive extra credit you must score an 80% or higher on this assignment (anything lower results in no extra credit). If you earn extra credit is calculated in the following manner: $\text{Old Test Score} + (75 - \text{Old Test Score})(2/3) = \text{New Test Score}$. This assignment will not be accepted late for any reason other than missing the day of school it is due in which case it must be turned in the next day you are in school even if you do not have class.

1) [4] Simplify: $5x - (6 - 10x) + \frac{9x - 3(16 - 3x)}{4} + 17$

2) [4] Evaluate when $x = -2$: $\frac{8 - x(6 - 4x)}{16 - 2x^2} - 7x + 5(8 - x)$

3) [4] Solve: $14 - 7(2x + 6) - 8x = 28 - 2(7x - 6)$

4) [4] A very wealthy person has a collection of cars. They have 1 less than 4 times as many Ferraris as he has Porsches. They have 10 less than twice as many Mustangs as Ferraris. If you add up the number of Porsches and Ferraris this number is the same as 1 more than twice as many Mustangs. How many Ferraris do they have?

5) [3] You have the choice between two internet plans. Plan A charges \$85 plus a fee of \$1.75 for each gig over 100 that you use each month. Plan B charges \$80 plus a fee of \$2.25 for each gig over 100 that you use each month. Compare these two plans to determine when Plan B is less than Plan A.

6) [4] Rectangle A has a width of $x + 2$ and a length of $x + 6$. Rectangle B has dimensions that fit the following properties. Its width is 2 less than twice the length of Rectangle A. Its length is 10 more than 3 times the width of Rectangle A. Find an expression that would represent the area of Rectangle B.

7) [4] Solve and graph the following inequality:

$$8 - 3x \geq 23 \quad \text{or} \quad 19 + 5x > 3(11 + x)$$

8) [3] Solve for p: $5d + \frac{tp}{a} - 8 = 10 + 3d$

9) [4] Timmy has \$4.75 in change to take to the bank. He has 5 less than 3 times as many nickels as dimes. He has $\frac{1}{2}$ as many quarters as nickels. How much are the quarters he has worth?