

Name: _____
Date: _____
Class: _____

Algebra
Unit 3
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) [3] While running a marathon (which is 26.2 miles) Sue runs the first 12 miles in 1 hour and 12 minutes. How many minutes (to the nearest second) does it take Sue to finish the marathon if she continues running at this constant pace?

2) [3] Product A sells 132 oz for \$27.06 and product B sells 134 oz for \$28.14. Which product has a higher unit rate?

3) [3] You had \$1275 in your savings account on January 1st. You are contributing money at a constant rate per month. After 4 months, your account has \$2575 in the account. How much would you expect to have in this account after 6 more months (10 total) if you save at the same rate?

4) [3] There are 3 feet in 1 yard, 12 inches in 1 foot, and 5280 feet in 1 mile. How many miles are there in 367,488 inches?

5) [4] Find the equation of a line that passes through $(-6, 2)$ and is perpendicular to the line with an equation $7x - 4y = -14$.

6) [4] It is snowing outside at a constant rate and there was no snow on the ground at the beginning of the snowfall. At 8pm there is 2in of snow on the ground. At 10pm there is 5in of snow on the ground. Create an equation for to determine the amount of snowfall (y) in relation the number of hours from 8pm (x). Based off this equation at what time did it start snowing?

7) [3] Graph the following inequality and explain if $(-2, -4)$ is in the solution set:
 $6y - 3x > -18$.

8) [3] Could the following be represented using a linear equation? Why or why not?
 $(-2, 726), (2, 952), (8, 1291)$

9) [4] Line A passes through point $(-5, -7)$ and is perpendicular to Line B which passes through $(6, -10)$ and $(-3, -4)$. Find and explain a 2nd point that could be on Line A.