

Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Class: \_\_\_\_\_

Algebra  
Unit 1  
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] Simplify:  $(2x^3yz^6)^4$

2) [3] Simplify:  $(2x - 7)^2$

3) [2] Write an expression that could be used to model the following statement: 7 less than twice the sum of a number  $x$  and 6).

4) [2] If  $x$  is an even number, what could be used to represent the next two odd numbers that are larger than  $x$ ?

5) [3] Evaluate:  $7\frac{8}{9} + 3\frac{3}{7} - 15\frac{3}{8}$

6) [4] Evaluate when  $x = -1$ :  $\frac{-2x^2 - (5-x)}{6-x(6-x^2)}$

7) [3] Simplify:  $6 - 2(x - 4) + 4x^2 - x(8 - x)$

8) [4] Billy runs  $x$  miles each day. Dan runs 10 less than 3 times as many miles as Billy runs each day. Steve runs  $\frac{1}{2}$  as many miles each day as Dan does. Find (and simplify) an equation that would represent the total amount of miles that all 3 of these people run combined in 1 week.

9) [4] In a stadium there are 52 seats in the 1<sup>st</sup> row, 61 in the 2<sup>nd</sup> row, 70 in the 3<sup>rd</sup> row, a pattern which continues until the last row, which is the 20<sup>th</sup> row. You are given two potential expressions that may be used to predict the number of seats in a row. One is  $50 + 2r$  and the other is  $43 + 9r$  ( $r$  is the number of the row). First, decide which is the correct expression. Second, use this expression to determine the number of seats combined between the 14<sup>th</sup> and 18<sup>th</sup> rows.

10) [4] Simplify:  $\frac{6(x+4)-24}{2x-4(2-x)+8}$