

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

Geometry  
Unit 3  
Ex Credit

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] In  $\triangle KQM \rightarrow q = 3x, m = 5x, k = 7x + 3$ , and the perimeter is 63. Which is the largest angle of the triangle?

2) [3]  $\triangle OPQ$  is isosceles with  $\angle P$  as the vertex angle. If  $m\angle O = 2x + 5$  and  $m\angle Q = 4x - 21$  find  $m\angle P$ .

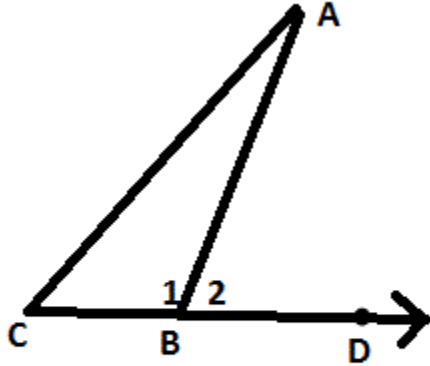
3) [3] Using your answers for #2 and the fact that the altitude is 14 find OQ.

4) [3] If 2 sides of a triangle are 201 and 314 what is the range of possible values for the 3<sup>rd</sup> side of this triangle?

5) [3] In  $\triangle RST \rightarrow m\angle R = 3x - 58, m\angle S = 2x + 1$ , and  $m\angle T = x - 3$ . Find the measurement of all 3 angles.

6) [6] In right triangle ABC ( $\angle B$  is the right angle)  $AB = 18$  and  $BC = 22$ . Solve the triangle.

7) [3]



If  $m\angle C = 4x + 10$ ,  $m\angle A = 4x - 9$ , and  $m\angle D = x + 4$  find  $m\angle B$ .

8) [6] If a triangle is formed by points  $(-2, 0)$ ,  $(2, 3)$ , and  $(4, -5)$  what type of triangle is it and what is the area of this triangle?

9) [5] If the two legs of a right triangle are represented by  $x - 1$  and  $x + 6$  while the hypotenuse is represented by  $2x - 1$  find the area of this triangle.

10) [5] If the two legs of an isosceles triangle are represented by  $6x - 2$  and  $x^2 + x + 2$  while the base is represented by  $2x^2 + 3x - 14$  find the measure of the vertex angle of this triangle.