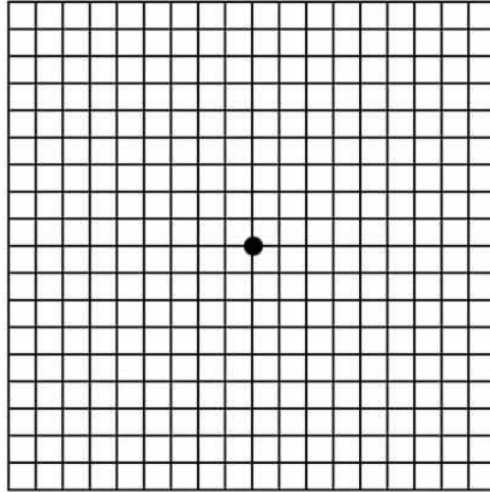


Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Class: \_\_\_\_\_

Geometry  
Review  
Graded Homework 14

Show all of your work for every problem. The numbers in the brackets are the points that each problem is worth. Multiple Choice Problems are worth 3.  
NO WORK = ZERO CREDIT

1) [3] What type of triangle is formed by A (-3, -2), B (-1, 3), and C (-1, -7)?



2) [3] In triangle ABC, side AB has midpoint D, and side BC has midpoint E. When A is connected to E and C is connected to D, these two segments intersect at Q.  $AQ = 3x - 2$ ,  $QE = x + 1$ , find and explain AE.

3) [4] In right triangle TYU,  $\angle U$  is a right angle and altitude UQ is drawn to hypotenuse TY.  $YQ = x - 4$ ,  $UY = x - 2$ , and  $UQ = x - 3$ . Find TQ.

4) [4] Two similar pentagons have corresponding sides represented by  $x - 3$ , and  $4x - 1$ . If the scale factor is 2:5 and the area of the larger pentagon is 400, find the area of the smaller pentagon.

5) [3] If two sides of a triangle are 10 and 27 what is a range for the possible values of the 3<sup>rd</sup> side.

6) [3] How much larger are the interior angles of a regular 22 sided polygon than the interior angles of a regular 18 sided polygon?

7) [4] Quadrilateral ASDF with A (-4, 5), B (1, 6), C (0, -2) and D (-5, -4) is transformed using first a translation of  $(x, y) \rightarrow (x + 2, y - 3)$  and then dilated with a scale factor of  $\frac{1}{2}$  centered at (2, 3). Graph this transformation.