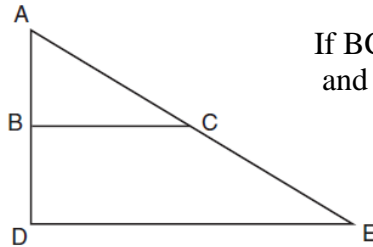


Name: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Class: \_\_\_\_\_

Geometry  
 Review  
 Graded Homework 12

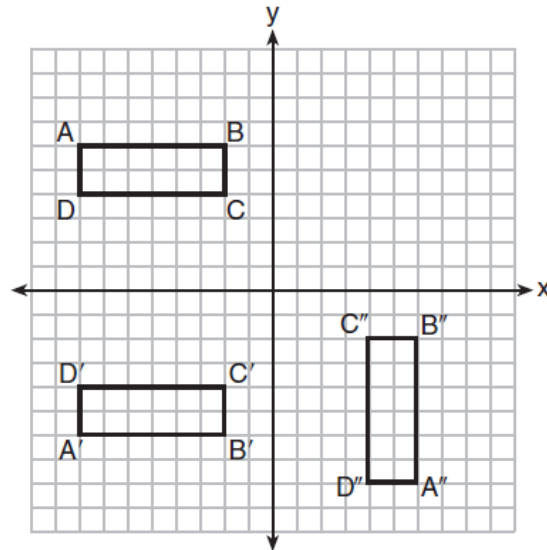
Show all of your work for every problem. The numbers in the brackets are the points that each problem is worth. Multiple Choice Problems are worth 3.  
**NO WORK = ZERO CREDIT**

- 1) [3] The image of  $\triangle ABC$  after a dilation of scale factor  $k$  centered at point  $A$  is  $\triangle ADE$ , as shown in the diagram below.



If  $BC = 14$ ,  $AB = 6$ ,  $\angle ABC$  is a right angle, and  $k = 4$ , find the area of triangle  $ADE$

- 2) [3] A sequence of transformations maps rectangle  $ABCD$  onto rectangle  $A''B''C''D''$ , as shown in the diagram below.

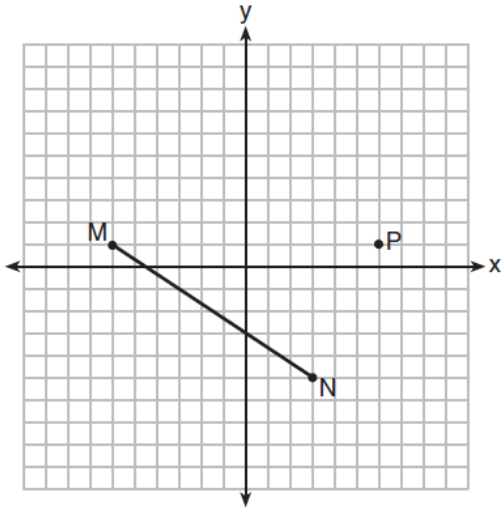


What would be a single transformation that could map  $ABCD$  onto  $A''B''C''D''$ ?

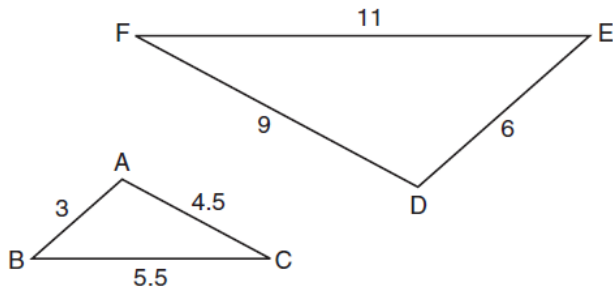
- 3) [3]

The endpoints of  $\overline{DEF}$  are  $D(1,4)$  and  $F(16,14)$ . Determine and state the coordinates of point  $E$ , if  $DE:EF = 2:3$ .

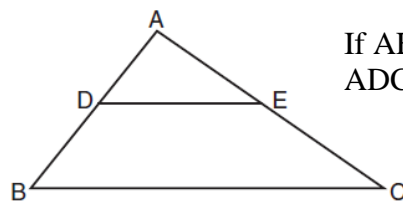
4) [4] If segment MN is dilated with a scale factor of  $\frac{1}{2}$  centered at P what would the coordinates of its image be?



5) [3] Are these 2 triangles similar? Explain your answer.



6) [4] In the diagram below,  $\triangle ABC \sim \triangle ADE$ .



If  $AE = 4$ ,  $EC = 10$ , and the area of triangle ADC is 35 what is the area of triangle ADE?

7) [3] If segment RS and TY intersect at point Z so that  $m\angle RZT = 10x + 55$  and  $m\angle TZS = 7x + 6$  find the  $m\angle RZY$ .

8) [3] Solve:  $4x^2 + 2 = 8x$