

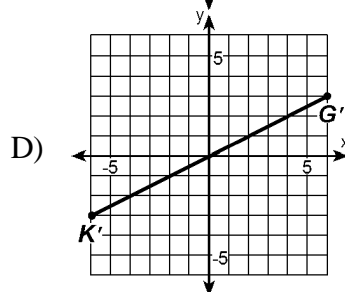
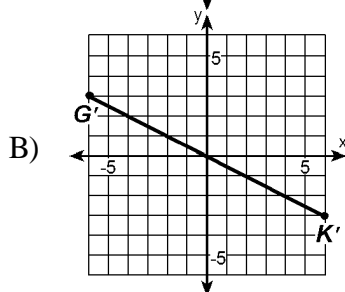
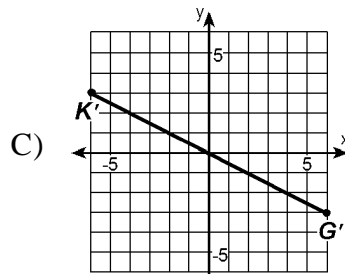
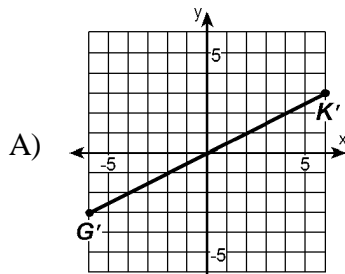
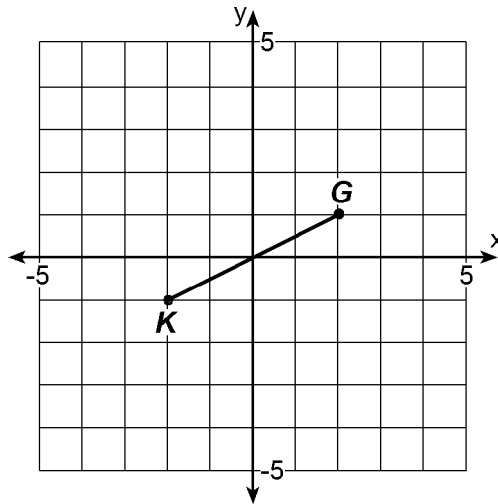
Name: \_\_\_\_\_  
 CC Geometry

Dilations Homework

- 1) What is a dilation scale factor that will produce an image congruent to the original?  
 A) 1                                      C) 3  
 B) 2                                      D) 0

- 2) Which mapping represents a dilation?  
 A)  $(x,y) \rightarrow (-y,-x)$   
 B)  $(x,y) \rightarrow (x + 2,y + 2)$   
 C)  $(x,y) \rightarrow (y,x)$   
 D)  $(x,y) \rightarrow (2x,2y)$

- 3) Which of the following graphs is the image of segment  $\overline{GK}$  after a dilation with a scale factor = 3 centered at the origin?



4) Find the image of  $(3,-2)$  under the dilation  $D_2$ .

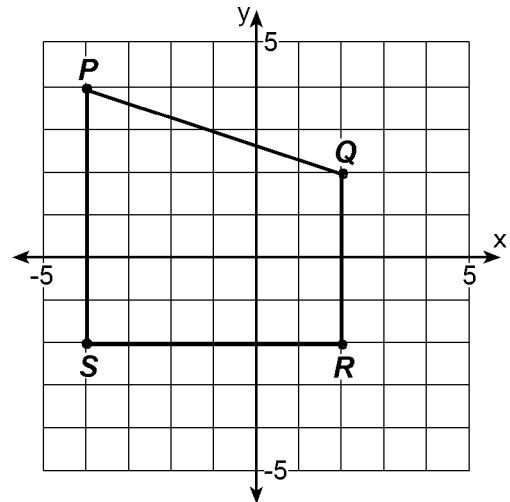
5) Under a dilation with respect to the origin, the image of  $A(1,2)$  is  $A'(5,10)$ . Under the same dilation, what are the coordinates of  $B'$ , the image of  $B(0,-3)$ ?

6) Under a dilation with constant of dilation  $k$ , the image of the point  $(2,3)$  is  $(8,12)$ . What is the value of  $k$ ?

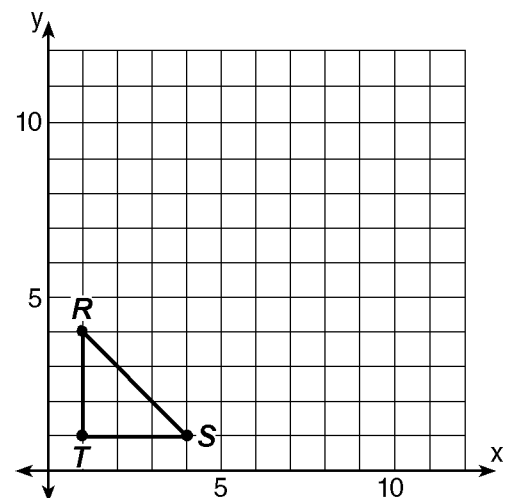
7) Under a dilation with constant of dilation  $k$ , the image of the point  $(18,12)$  is  $(6,4)$ . What is the value of  $k$ ?

8) A triangle has coordinates  $A(-1,-2)$ ,  $B(-4,-2)$  and  $C(-4,-5)$ . What are the coordinates of point  $A'$ , the image of point  $A$ , under a dilation with a scale factor of 3?

9) Dilate quadrilateral  $PQRS$  with a scale factor of  $\frac{1}{2}$ . Use the origin for the center of dilation and label the image appropriately.



10) Dilate triangle  $RST$  with a scale factor = 3. Use point  $T$  as the center of dilation and label the image appropriately.



- 1) A      2) D      3) D
- 4) (6,-4)
- 5)  $B'(0,-15)$
- 6) 4
- 7)  $\frac{1}{3}$
- 8) (-3,-6)
- 9)  $P'(-2,2)$ ,  $Q'(1,1)$ ,  $R'(1,-1)$ , and  $S'(-2,-1)$
- 10)  $R'(1,12)$ ,  $S'(12,1)$ , and  $T'(1,1)$