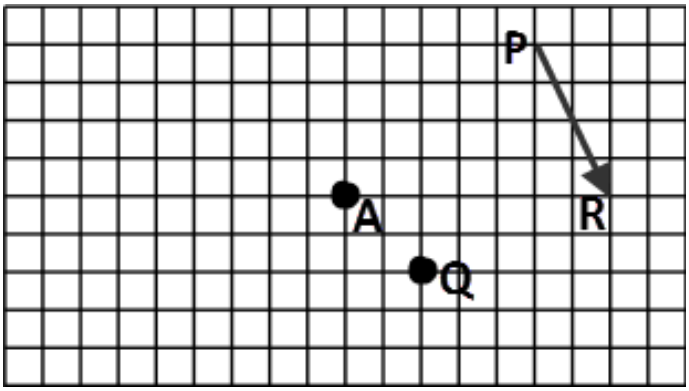
Geometry R – Mrs. Cowen
Unit 2B – Day 1 HW

Name_____
Date_____

1. On the grid, graph and label the image of point A under each transformation:



a. Translate down 2, left 4. *(label B)*

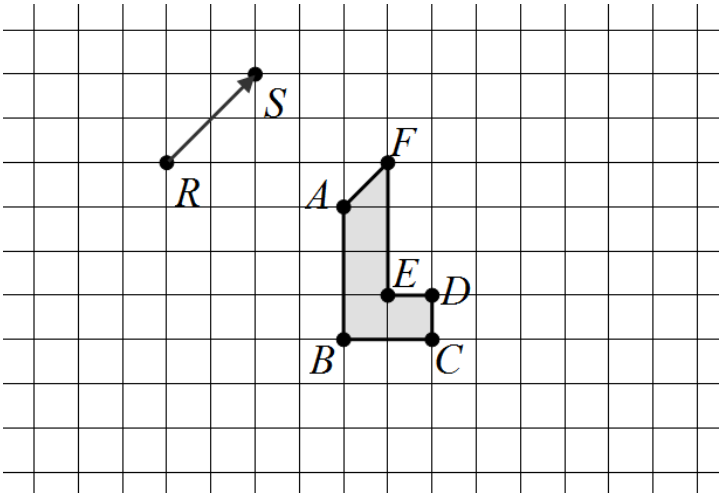
b. Translate along vector $\overrightarrow{PR}$. *(label C)*

c. Dilate about Q by a factor of 3. *(label D)*

d. $T_{<-3,2>}$ *(label E)*

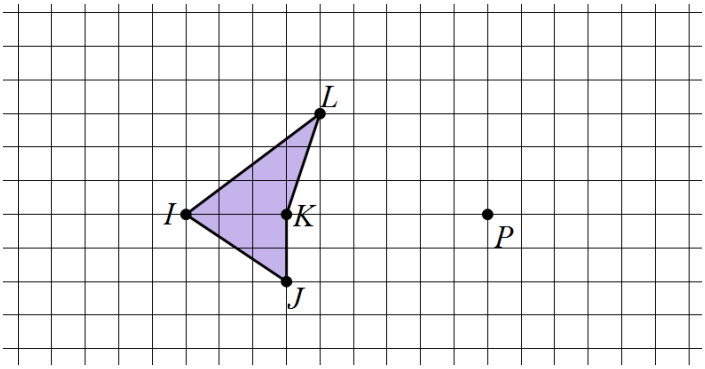
e. $D_{P,2}$ *(label F)*

2a. Graph and label the image of ABCDEF under $T_{\overline{RS}}$ and label its image A'B'C'D'E'F'.



b. What can conclusion can be made about $m\angle AFE$ and $m\angle A'F'E'$? Explain your reasoning.

3a. Graph and label the image of IJKL under $D_{P,1/2}$.



b. What can conclusion can be made about $m\angle LIJ$ and $m\angle L'I'J'$? Explain your reasoning.

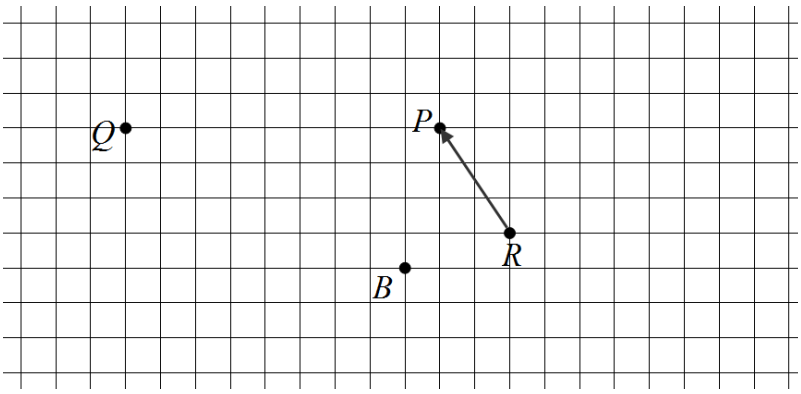
4. Point B is the ***image*** of points C,D,E, and F under each transformation. Graph and label each pre-image point.

a. C is translated along the vector <3, -2>.

b. D is transformed under $T_{\overline{RP}}$.

c. E is dilated about Q by a factor of 4.

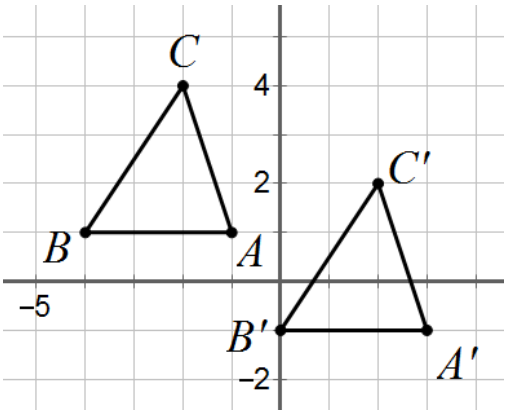
d. F is transformed under $D_{R,1/2}$.



5.

a. Precisely describe a transformation that would map ΔABC onto ΔA'B'C'.

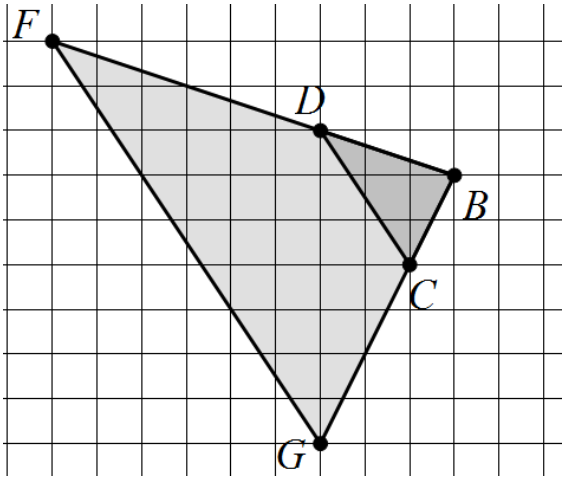
b. Is the transformation you described above a Rigid Motion? Explain.



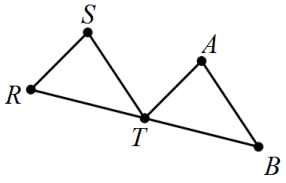
6.

a. Precisely describe a transformation that would map ΔDBC onto ΔFBG.

b. Is the transformation you described above a Rigid Motion? Explain.



7. Precisely describe the translation that would map ΔRST onto ΔTAB.



8. The line $y = \frac{4}{3}x + 2$ is dilated by a factor of 5 with respect to the origin. Write the equation of the resulting image.

9. The line $y = -5x - 14$ is dilated by a factor of 1/2 with respect to the origin. Write the equation of the resulting image.