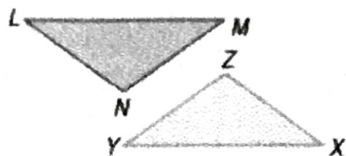


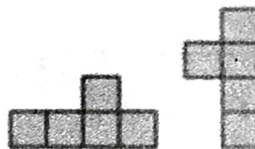
Homework 8-5

Determine if the two figures are congruent by using transformations.

1.



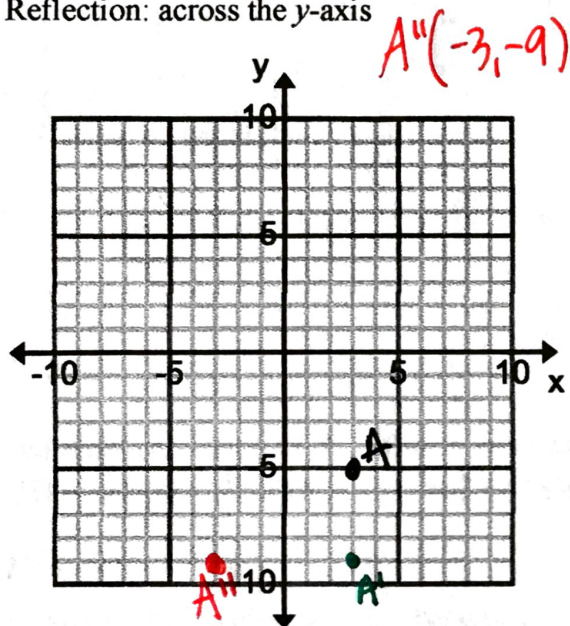
2.



Graph and label the image of $A(3, -5)$ after the described glide reflection. Write the final coordinates

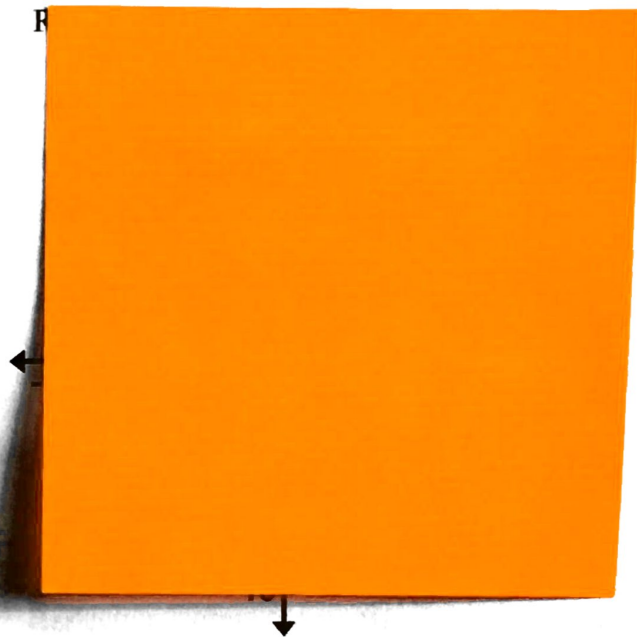
3. Translation: $(x, y) \rightarrow (x, y - 4)$

Reflection: across the y -axis



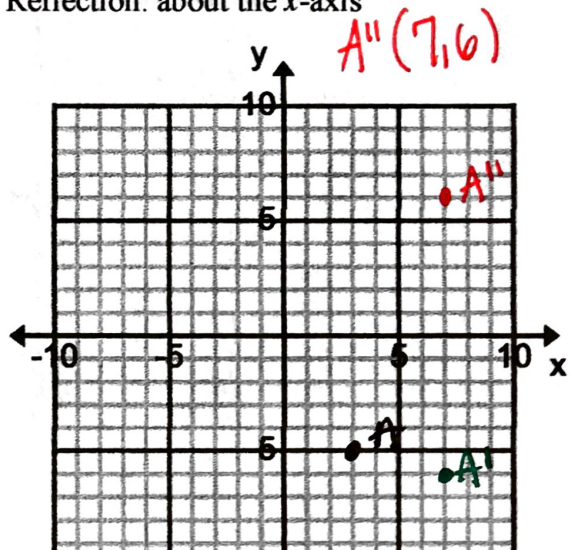
4. Translation: $(x, y) \rightarrow (x - 6, y - 1)$

P



5. Translation: $(x, y) \rightarrow (x + 4, y + 1)$

Reflection: about the x -axis



6. Translation: $(x, y) \rightarrow (x - 3, y - 3)$

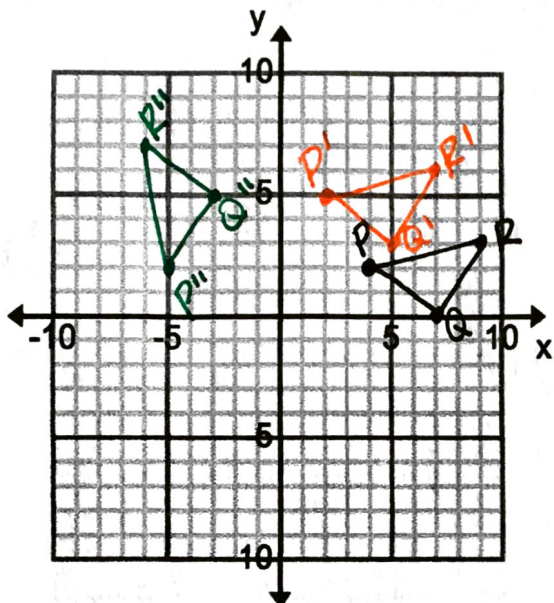


Graph and label $\triangle PQR$ and every image following the composition of transformations in the order they appear. Write the coordinates of the final vertices.

7. $P(4,2), Q(7,0), R(9,3)$

Translation: $(x,y) \rightarrow (x-2, y+3)$

Rotation: 90° clockwise about the origin.



$P''(-5,2) \quad Q''(-3,5) \quad R''(-6,7)$

8. $P(4,5), Q(7,1), R(8,8)$

Translation: $(x,y) \rightarrow (x, y-7)$

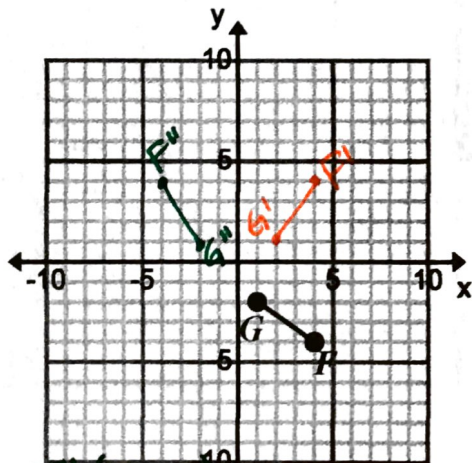
Reflection: across the y -axis

Graph and label the image of \overline{FG} after a composition using the given transformation in the order they appear. Write the coordinates of the final vertices.

9. $F(4,-4), G(1,-2)$

Rotation: 90° clockwise about the origin

Reflection: across the y -axis



$F''(-4,4) \quad G''(-2,1)$

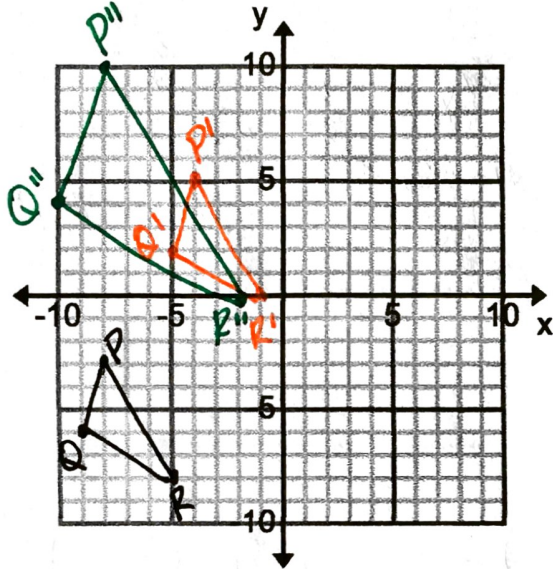
10. $F(4,-4), G(1,-2)$

Graph and label ΔPQR and every image following the composition of transformations in the order they appear. Write the coordinates of the final vertices.

11. $P(-8, -3)$, $Q(-9, -6)$, $R(-5, -8)$

Translation: $(x, y) \rightarrow (x+4, y+8)$

Dilation: Center of dilation is the origin, $k = 2$

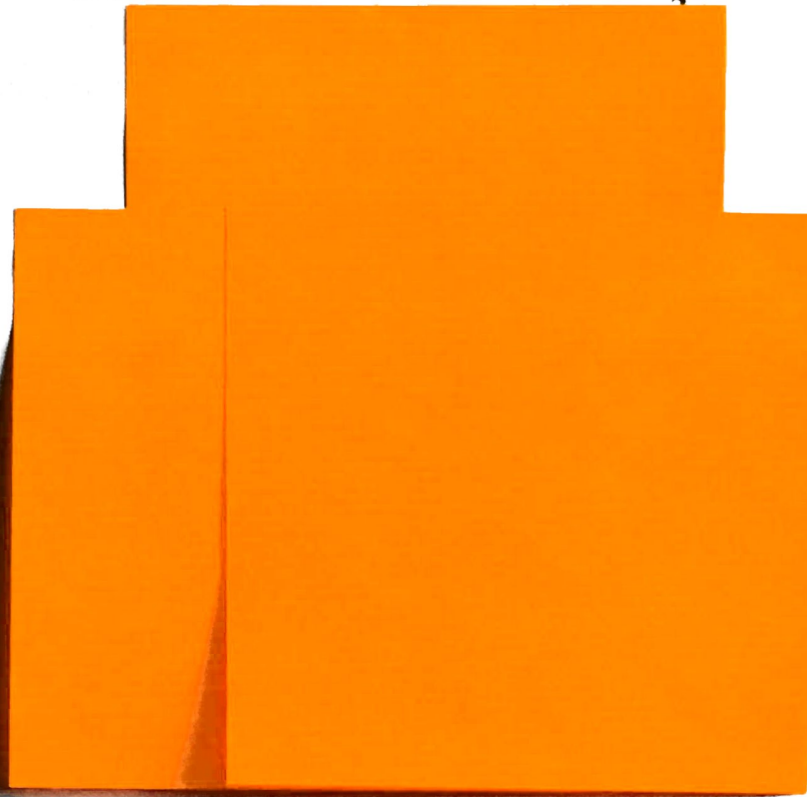


$P''(-8, 10)$ $Q''(-10, 4)$ $R''(-2, 0)$

12. $P(4, 2)$, $Q(4, -2)$, $R(6, -4)$

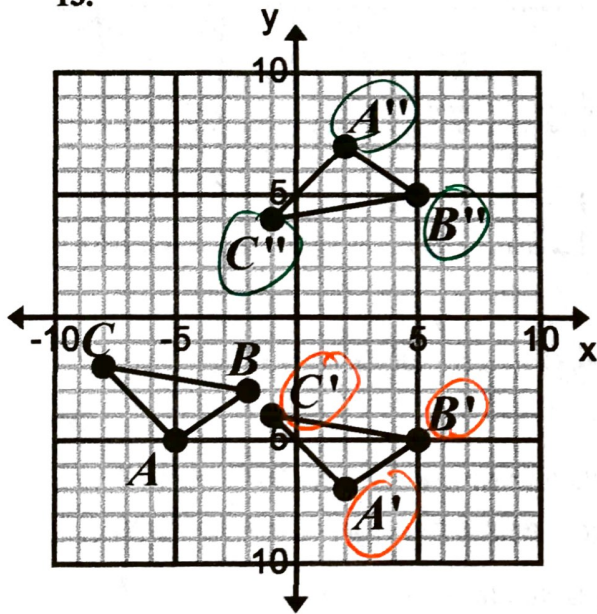
Reflection: across the y-axis

Dilation: Center of dilation is the origin, $k = \frac{1}{2}$



Identify the following composition of transformations.

13.



a. Identify the first transformation and give details.

1st Trans: translation

Details: $(x, y) \rightarrow (x+7, y-2)$

b. Identify the second transformation and give details

2nd Trans: reflection

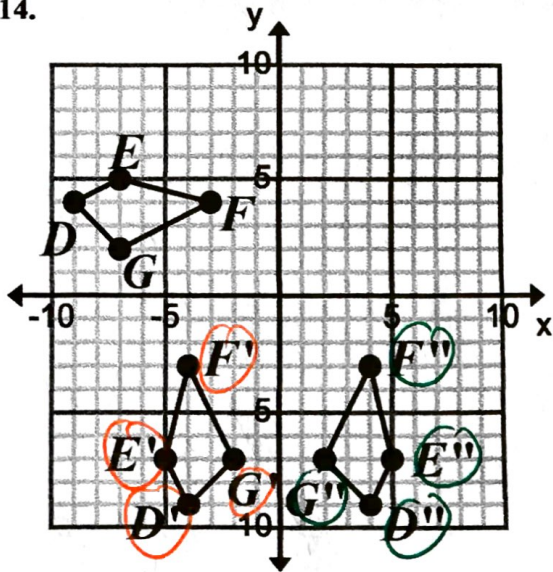
Details: over x-axis

c. Is the final image congruent to the initial pre-image?

Yes!

Identify the following composition of transformations.

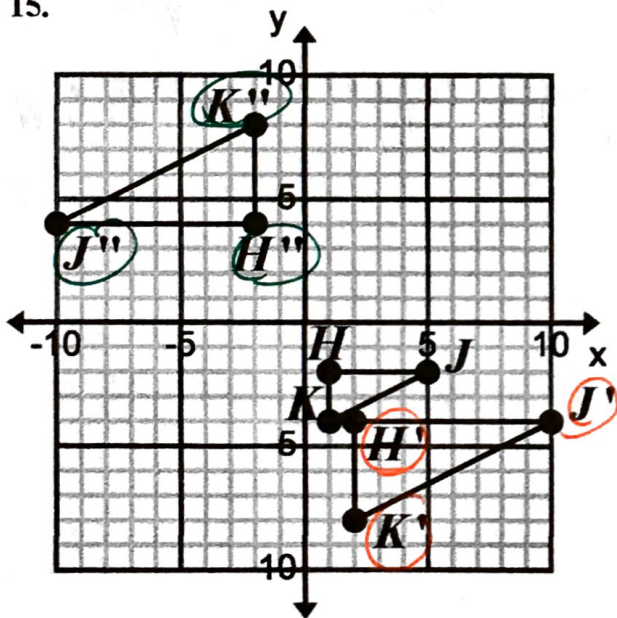
14.



a. Identify

b. Ide

15.



a. Identify the first transformation and give details

1st Trans: Dilation

Details: center = origin

Scale factor k=2

b. Identify the second transformation and give details.

2nd Trans: rotation

Details: 180° around origin

c. Is the final image congruent to the initial pre-image? NO.

angle RST.

maps $\triangle MNO$ onto $\triangle RST$?

t M then a reflection

t M then a translation

