

Please use patty paper and/or graph paper when needed

Name: _____ Period: _____

MODULE 1- TOPIC 1 TRANSFORMATIONS REVIEW

1. Determine which transformation represents each scenario below: Translation, Rotation, or Reflection.

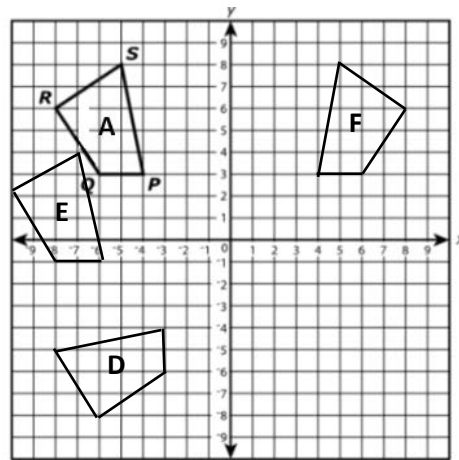
- A. Looking into a lake and seeing your image in the lake. _____
- B. A gymnast doing a cartwheel. _____
- C. A person rides up an elevator, gets off and walks left towards his office. _____

2. Given coordinates of point A (-9, -3), what would A' be if translated using the following rule, $(x + 3, y - 7)$.

A' _____

3. Using the pre- image A, match the transformations that occurred to get to the other polygons D, E, and F. Some of the transformations will not be used.

- _____ Reflection over the x-axis
- _____ Reflection over the y-axis
- _____ Rotate 90° counter clockwise
- _____ Rotate 90° clockwise
- _____ Translate 4 units left and down 2 units.
- _____ Translate 4 units down and left 2 units.



4. Sammy drew a triangle with coordinates (5, 1), (8, 4) and (2, 3). Then she drew another triangle with coordinates (5, -1), (8, -4) and (2, -3). What transformation was used?

5. Complete each statement. Use #'s/right/left to fill in the blanks.

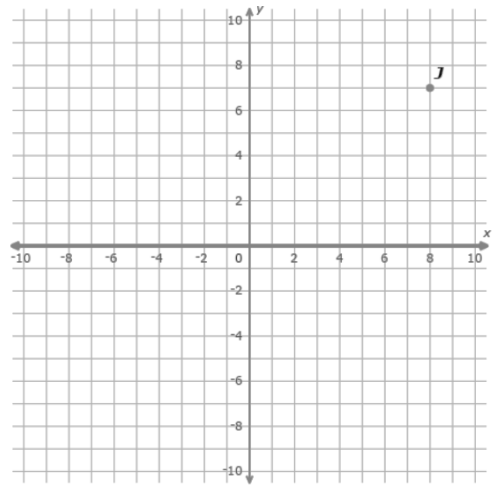
- A 90° clockwise rotation is _____ turn to the _____.
- A 90° counter clockwise rotation is _____ turn to the _____.
- A 180° rotation is _____ turns.
- A 270° clockwise rotation is _____ turns to the _____.
- A 270° counter clockwise rotation is _____ turns to the _____.
- A rule to find the coordinates easily without graphing for a 180° rotation is (_____ , _____). So if the point (-2, 5) was rotated 180°, the coordinates of the image would be (_____ , _____).

6. Describe in words what the following rules are for the following translations.

- A. $(x, y - 5)$
- B. $(x + 5, y)$
- C. $(x - 1, y + 7)$

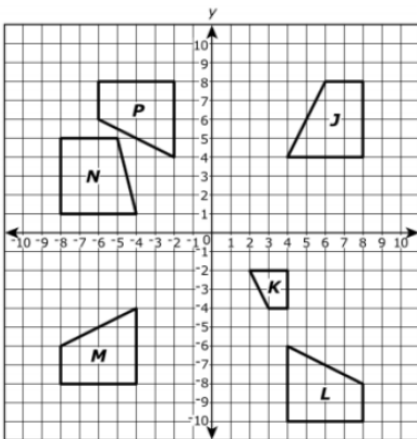
7. Given the following coordinate point $J(8, 7)$, graph the following:

- A. Translate using the rule $(x - 10, y - 6)$ and label it A
- B. Reflect J over the x-axis and label it B.
- C. Reflect J over the y-axis and label it C.
- D. Rotate J 90° clockwise and label it D.
- E. Rotate J 180° and label it E.
- F. Rotate J 90° counter clockwise and label it F.
- G. Translate up 2 and right 1 and label it G.

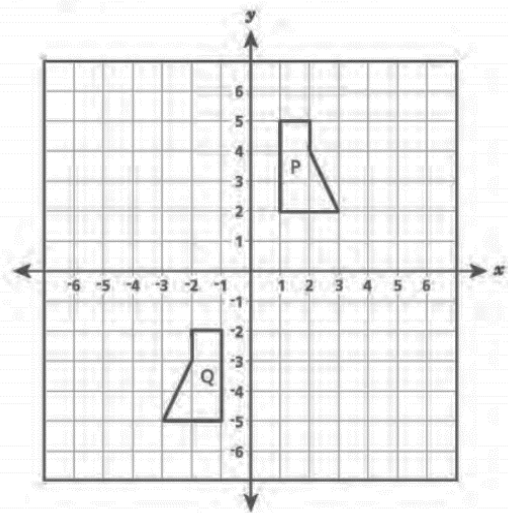


8. Which figure would be the image if pre-image M was reflected over the x-axis and then translated 2 units to the right? _____

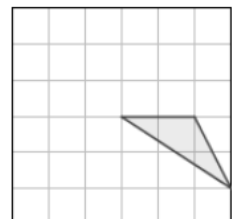
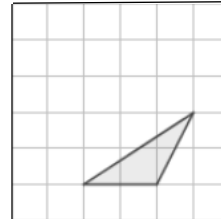
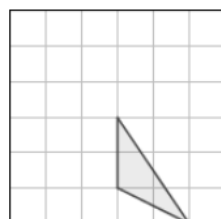
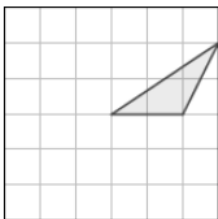
Which figure would be the image if pre-image J was rotated 90° clockwise and then translated down 2 units? _____



9. Which transformations were used to create image Q from image P?



10. Given the picture below, use patty paper to determine if each is a reflection, rotation, or translation.



11. Connor drew a triangle with coordinates $A(1, 1)$, $B(3, 4)$ and $C(3, 1)$. Then he drew another triangle with coordinates $A'(-3, 6)$, $B'(-1, 9)$ and $C'(-1, 6)$. What transformation was used?

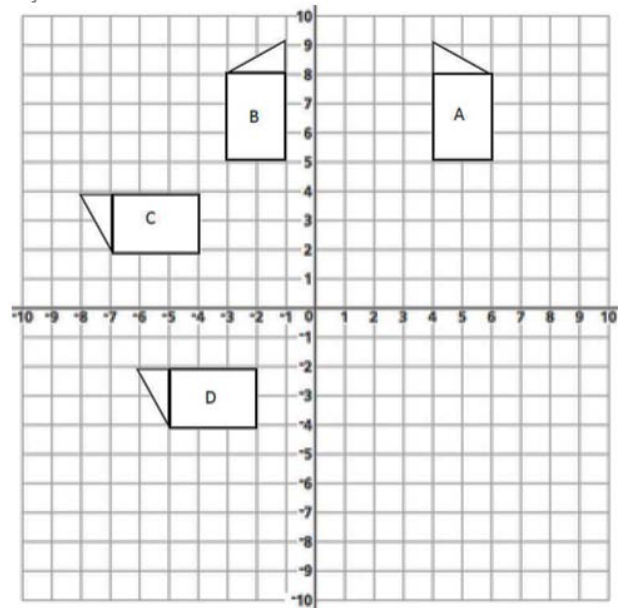
12-14: Using the image to the right, answer the following questions:

12. Using figure A, determine the transformation that occurred to get from A to image B.

- A. Reflection of the y-axis, slide left 3 units.
- B. Reflection over the x-axis, slide 3 units right.
- C. Reflection of the y-axis, slide right 3 units.
- D. Reflection over the x-axis, slide 3 units right.

13. Using figure B, determine the transformation that occurred to get from B to image C.

- A. Rotate 90° clockwise about the origin, translate down 1 and left 8 units
- B. Rotate 90° counter clockwise about the origin, translate right 1 unit and up 5 units.
- C. Reflect over the y-axis, Rotate 90° counter clockwise about the origin, and slide down one unit.



14. Using figure B, determine the transformation that occurred to get from B to image D.

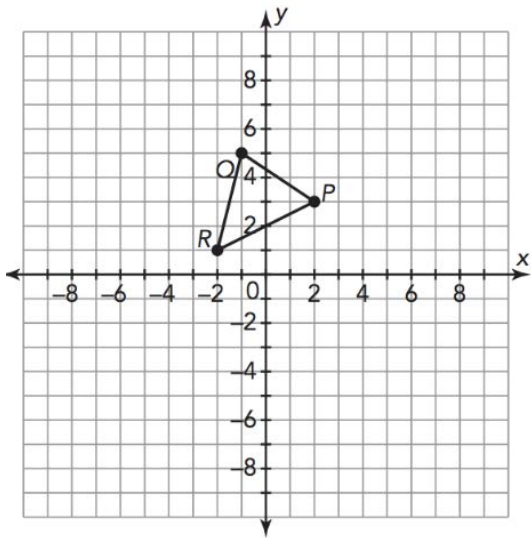
15. For all rigid motions (including translations, rotations, and reflections), are the following statements True or False about the pre-image and the image?

- ___ Side lengths are congruent
- ___ Angle measures are congruent
- ___ The two figures will have the same size
- ___ The two figures will have the same shape
- ___ The two figures will be in the same location
- ___ The two figures are congruent
- ___ Corresponding line segments are congruent

16. Complete each statement. Use #'s/right/left to fill in the blanks.

- A 90° clockwise rotation is the same as a _____.
- A 90° counter clockwise rotation is the same as a _____.
- A 180° counter clock wise rotation is the same as _____.
- A 270° clockwise rotation is the same as a _____.
- A 270° counter clockwise rotation is is the same as a _____.

17. Given the triangle PQR below answers the following questions on the right.



- A. If triangle PQR is translated 2 units to the right to form P'Q'R', how are the values in the ordered pairs affected by the translation?
- B. Write the rule for P'Q'R' (x, y).
- C. If triangle PQR is translated 4 units up to form P''Q''R'', how are the values in the ordered pairs affected by the translation?
- D. Write the rule for P''Q''R'' (x, y).

18. Which of the pictures are congruent to the picture shown?
Justify your response.



Picture 1



Picture 3

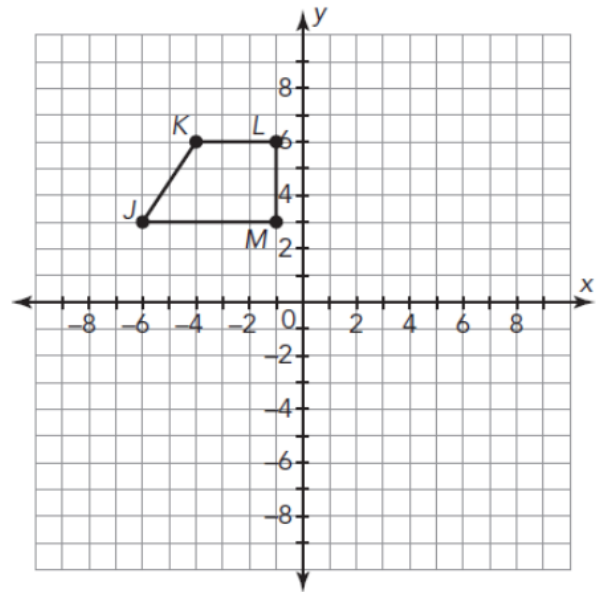


Picture 2



Picture 4

19. A.) Reflect trapezoid JKLM over the y-axis.



B.) If trapezoid JKLM is reflected over the y-axis, how are the values of the ordered pairs affected by the translation?