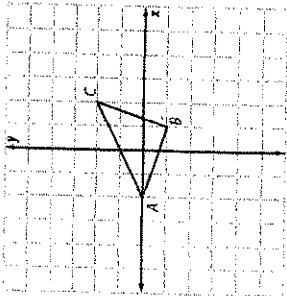


Directions: use the rule provided to transform the figures. Use colors or prime notation

Transformations

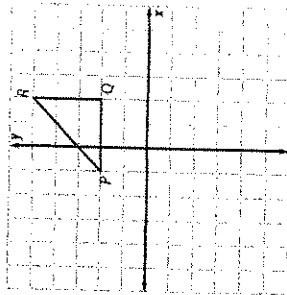
Applications Task 8

8. a. $(x, y) \rightarrow (3x, 3y)$



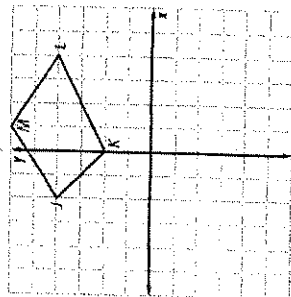
Type of Transformation:

b. $(x, y) \rightarrow (-x + 8, y)$



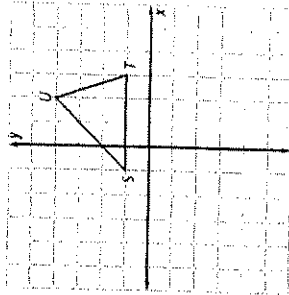
Type of Transformation:

c. $(x, y) \rightarrow (\frac{1}{2}x, \frac{1}{2}y)$



Type of Transformation:

d. $(x, y) \rightarrow (x, -y - 4)$



Type of Transformation:

Transformations Lab Review

Name _____

Directions: For each problem-

(1) Vertices of Images- you will include work (using transformation rules from the pre-image to image, and second image when applicable) to calculate the vertices after each listed transformation. Make sure the coordinates are clearly written!

(2) Graphs- you will sketch the pre-image figure and the image figure (and the second image when applicable) that is formed after each listed transformation together on the same graph, per problem number. If you change the scale on the x- or y- axis, be sure to mark it by 2s, etc. Label each pre-image and image with the proper vertex names and markings. Make sure to color/highlight/shade each image figure in a different color than the pre-image figure on the graphs & label all vertices!

Translations

1. Triangle ABC with A(3, -2), B(1, 3), and C(-3, 3); left 4, down 1
2. Polygon PQRS with P(-1, -1), Q(-5, 1), R(-2, 4), S(0, 4); right 3, down 2
3. Triangle ABC with A(3, -2), B(1, 3), and C(-3, 3); scale factor = 3
4. Polygon PQRS with P(-1, -1), Q(-5, 1), R(-2, 4), S(0, 4); scale factor = 1/2

Dilations

Reflections

5. Triangle ABC with A(3, -2), B(1, 3), and C(-3, 3); $y = x$
6. Polygon PQRS with P(-1, -1), Q(-5, 1), R(-2, 4), S(0, 4); y-axis
7. Quadrilateral DEFG with D(-4, 5), E(2, 6), F(3, 1), and G(-3, -4); x-axis

Rotations

8. Triangle ABC with A(3, -2), B(1, 3), and C(-3, 3); 90°
9. Polygon PQRS with P(-1, -1), Q(-5, 1), R(-2, 4), S(0, 4); 180°
10. Quadrilateral DEFG with D(-4, 5), E(2, 6), F(3, 1), and G(-3, -4); 270°

Multiple Transformations (graph pre-image, image, and second image all together)

Complete the multiple transformations in the order listed. Write the rule that describes the end transformation.

11. Triangle ABC with A(3, -2), B(1, 3), and C(-3, 3); translate left 5, up 2, then a 90° rotation
12. Polygon JKLMNO with J(-3, 1), K(-2, 4), L(2, 4), M(3, 1), N(-2, -2) and O(-2, -2); dilate with scale factor 2, then a reflection in the line $y = -x$

1.

1. A' _____
B' _____
C' _____

2.

2. P' _____
Q' _____
R' _____
S' _____

3.

3. A' _____
B' _____
C' _____

4.

4. P' _____
Q' _____
R' _____
S' _____

7.

7. D' _____
E' _____
F' _____
G' _____

8.

8. A' _____
B' _____
C' _____

9.

9. P' _____
Q' _____
R' _____
S' _____

10.

10. D' _____
E' _____
F' _____
G' _____

5.

5. A' _____
B' _____
C' _____

6.

6. P' _____
Q' _____
R' _____
S' _____

11.

11. A'' _____
B'' _____
C'' _____
Rule: _____

12.

BONUS
J'' _____
K'' _____
L'' _____
M'' _____
N'' _____
O'' _____
Rule: _____