**Year Long Math 2 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Unit 1 REVIEW: Transformations**

**SHOW ALL WORK!!!**

1) The vertices of a triangle are A (0, 1), B (2, -6), and C (6, -6). Graph the image rotated 270º counter-clockwise around the origin. Name and label the image points.

A’\_\_\_\_\_\_\_\_\_\_\_ B’\_\_\_\_\_\_\_\_\_\_ C’ \_\_\_\_\_\_\_\_\_\_

A

C

B

Algebraic Rule: (x,y) → (\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_ )

2) What is the algebraic rule for a translation of 2 units to the right and 9 units up?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) The vertices of a triangle are D (6, -1), E (6, 6), and F (1, 6). Graph the image reflected over the line y = -x. Name and label the image points.

D

F

E

D’\_\_\_\_\_\_\_\_\_\_\_ E’ \_\_\_\_\_\_\_\_\_\_ F’\_\_\_\_\_\_\_\_\_

Algebraic Rule: (x,y) → (\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_ )

4) Find the image of A(-1, -2) and B(-9, 11) under a transformation (x, y) (x - 3, y + 5).

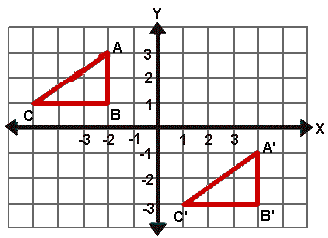
A’ \_\_\_\_\_\_\_\_\_ B’ \_\_\_\_\_\_\_\_\_\_\_\_

5) **Graph** the points A (5, 3) and B(3, -2) and C(-2 , 1) and then rotate each 180˚ clockwise around the origin. Name and label the images.

A’\_\_\_\_\_\_\_\_\_\_\_ B’ \_\_\_\_\_\_\_\_\_\_\_\_ C’ \_\_\_\_\_\_\_\_\_\_\_

Algebraic Rule: (x,y) → (\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_ )

6) Give an algebraic rule for the given transformation.



\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7) Graph the image of triangle GHI with G(-3, -5), H(2, -5) and I(-3, -1) after a reflection over the y-axis. Name and label the image points.



G’ \_\_\_\_\_\_\_\_ H’ \_\_\_\_\_\_\_\_ I’ \_\_\_\_\_\_\_\_

G

I

H

Algebraic Rule: (x,y) → (\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_ )

**Use for #8-9: Triangle JKL has vertices J (1, -2), K (5,-1), and L (3, 5).**

8) Graph the image of triangle JKL after a rotation of 90 degrees counterclockwise around the origin. Name and label the image points.

L

K

J

J’ \_\_\_\_\_\_\_\_ K’ \_\_\_\_\_\_\_\_ L’ \_\_\_\_\_\_\_\_

9) Graph the image of triangle JKL after a reflection over the line x = -1. Name and label the image points.

L

K

J

J’ \_\_\_\_\_\_\_\_ K’ \_\_\_\_\_\_\_\_ L’ \_\_\_\_\_\_\_\_

10) Quadrilateral MNOP has vertices M (6, -1), N (3, -3), O (0, -1), P (3, 4). Graph the image after a reflection over the x-axis. Name and label the image points.

P

M

N

O

M’ \_\_\_\_\_\_\_\_ N’ \_\_\_\_\_\_\_\_ O’ \_\_\_\_\_\_\_\_ P’ \_\_\_\_\_\_\_\_



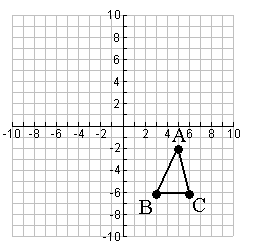
11) Draw the line of reflection and write its equation.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12) State the type of transformation that maps figure A to figure given. (reflection, translation, or rotation)



1. A→B \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. A → C \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. A → D \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. A → E \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. A→ F \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. A→ G \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



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| --- | --- |
| 13) Graph the dilation image of rectangle ABCD, using a scale factor of 1/2 and the center of dilation at the origin.    B  A | 14) Rotate triangle ABC 90counterclockwise around the origin. Then reflect that image over the x-axis. Name and label the points after each transformation.  A’\_\_\_\_\_\_\_\_\_ B’ \_\_\_\_\_\_\_\_\_\_ C’\_\_\_\_\_\_\_\_\_\_  A”\_\_\_\_\_\_\_\_\_ B” \_\_\_\_\_\_\_\_\_\_ C”\_\_\_\_\_\_\_\_\_ |

D

C