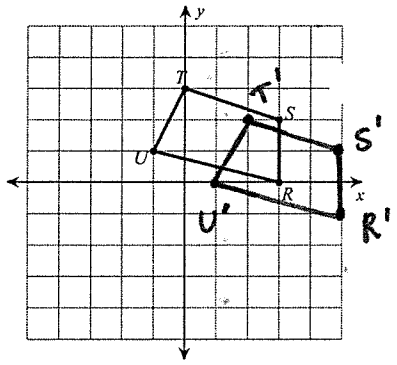
Math 1 Name Key ID: 1

Transformations Test Review

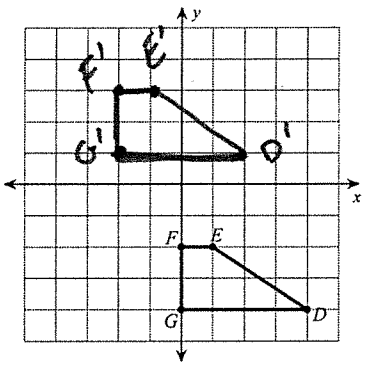
Date_____ Period____

Graph the image of the figure using the transformation given.

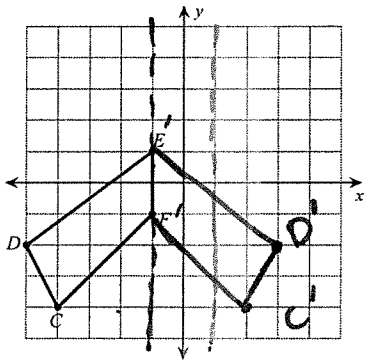
1) translation: 2 units right and 1 unit down



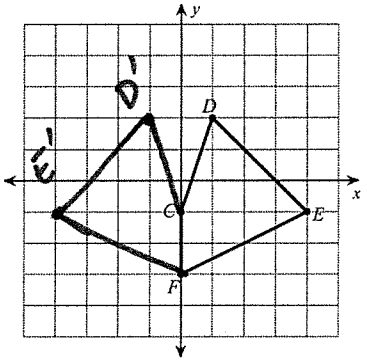
2) translation: $(x, y) \rightarrow (x - 2, y + 5)$



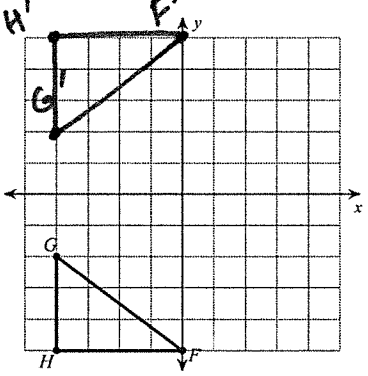
3) reflection across $x = -1$



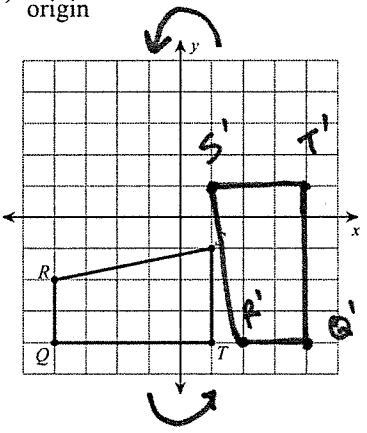
4) reflection across the y-axis



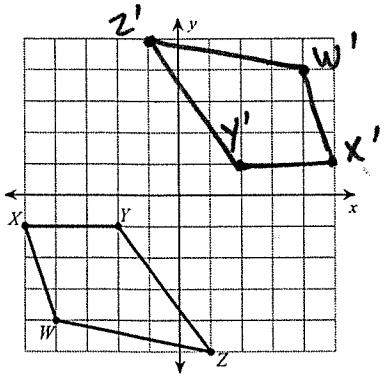
5) reflection across the x-axis



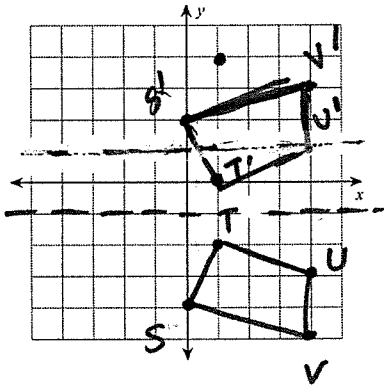
6) rotation 90° counterclockwise about the origin



7) rotation 180° about the origin



8) reflection across $y = -1$
$S(0, -4)$, $T(1, -2)$, $U(4, -3)$, $V(4, -5)$



Find the coordinates of the vertices of each figure after the given transformation.

10) translation: $(x, y) \rightarrow (x + 2, y - 6)$
$L(-3, 1)$, $K(-2, 3)$, $J(-2, 1)$

L'(-1,-5), K'(0,-3), J'(0,-5)

11) rotation 180° about the origin
$U(0, -1)$, $V(3, 0)$, $W(3, -4)$

U'(0,1), V'(-3,0), W'(-3,4)

12) rotation 90° counterclockwise about the origin
$M(-4, 4)$, $L(-2, 5)$, $K(-2, 4)$

M'(-4,-4), L'(-5,-2), K'(-4,-2)

Write a rule to describe each transformation in coordinate notation (x,y) ->

13) $B(-3, -3)$, $C(-4, 1)$, $D(-1, 2)$, $E(0, 0)$
to
$B'(-3, 3)$, $C'(1, 4)$, $D'(2, 1)$, $E'(0, 0)$

Rotation 90° clockwise

14) Optional $K(-4, -4)$, $J(-2, -2)$, $I(1, -2)$
to
$J'(-2, -2)$, $I'(-2, 1)$, $K'(-4, -4)$

Reflection y=x

15) $H(-1, -4)$, $I(0, 0)$, $J(5, 1)$, $K(4, -2)$
to
$I'(0, 0)$, $J'(-5, 1)$, $K'(-4, -2)$, $H'(1, -4)$

Reflection across the y-axis

16) $P(-5, -5)$, $Q(-5, -4)$, $R(-2, -2)$, $S(-2, -5)$
to
$Q'(-5, 4)$, $R'(-2, 2)$, $S'(-2, 5)$, $P'(-5, 5)$

Reflection across the x-axis.

Dilations Review Name Key

1- With the points (-4, -2) (1, -3) (2, -5) (-1, 7).
What are the new points if the **scale factor** of dilation is **3**?

(-12, -6) (3, -9) (6, -15) (-3, 21

2- With the points (8, 4) (-6, -6) (-10, 12) (2, -4).

What are the new points if the **scale factor** of dilation is $\frac{1}{2}$?

_____ _____ _____ _____

A B C

3- (2, 3), (-3, 2), and (2, -2) is going to be enlarged by **a scale factor of 2.5**

What are **the new coordinates** of the triangle?

(5, 7.5) A' (-7.5, 5) B' (5, -5) C'

Graph the new triangle.