

Geometry:

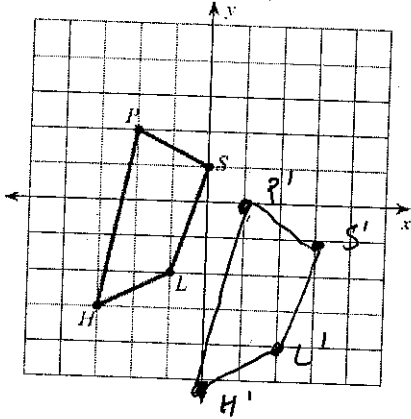
Name: Key

Per: _____ Date: _____

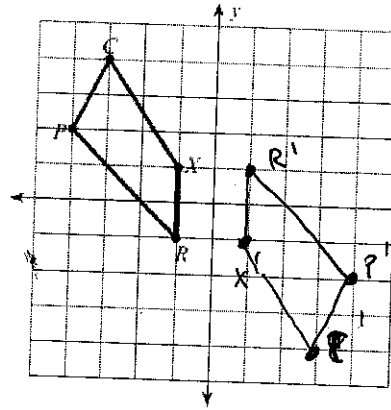
Transformations - REVIEW

Graph the image of the figure using the transformation given.

1) translation: 3 units right and 2 units down



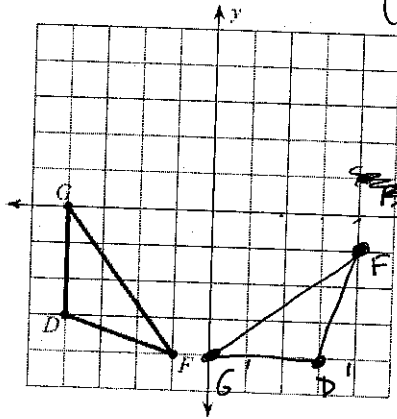
2) rotation 180° about the origin



$$(x, y) \rightarrow (-x, -y)$$

V	P	I
C	(-3, 4)	(3, -4)
P	(-4, 2)	(4, -2)
X	(-1, 1)	(1, -1)
R	(-1, -1)	(1, 1)

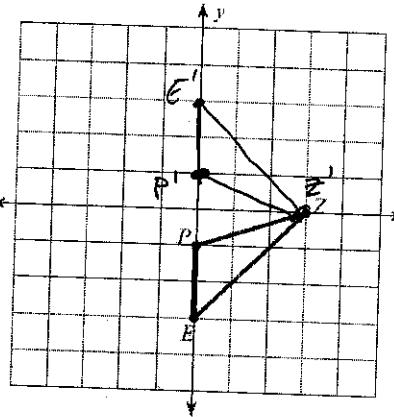
3) rotation 90° counterclockwise about the origin



$$(x, y) \rightarrow (-y, x)$$

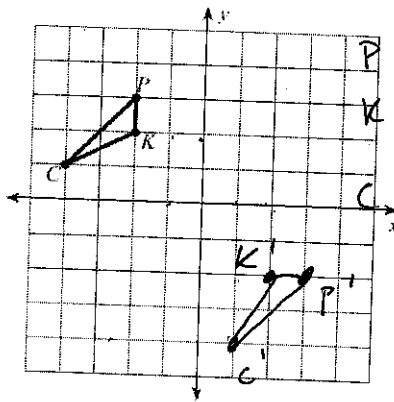
V	P	I
G	(-4, 0)	(0, -4)
D	(-4, -3)	(+3, -4)
F	(-1, -4)	(+4, -1)

4) reflection across the x-axis



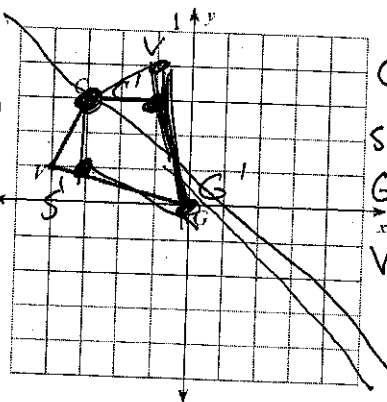
$$(x, y) \rightarrow (x, -y)$$

5) reflection across $y = x$



P	I
P(-2, 3)	(3, -2)
K(-2, 2)	(2, -2)
C(-4, 1)	(1, -4)

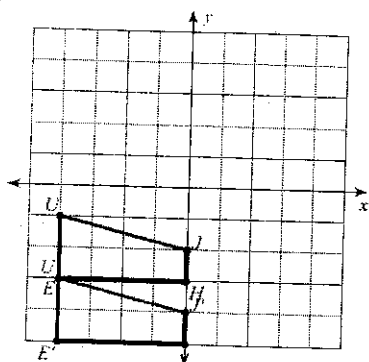
6) reflection across $y = -x$



P	I
C(-3, 3)	C'(3, 3)
S(-1, 3)	S'(-3, +1)
G(0, 0)	G'(0, 0)
V(-4, 1)	V'(-1, 4)

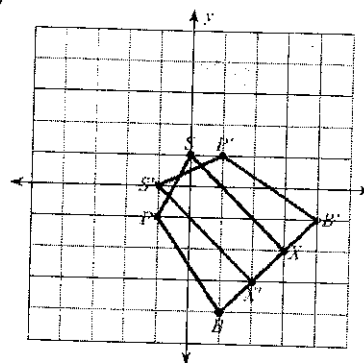
Write a rule to describe each transformation.

7)



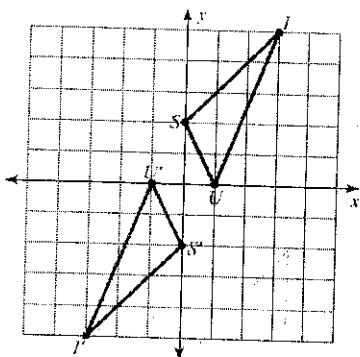
- A) translation: 1 unit left and 6 units up
- B) rotation 90° counterclockwise about the origin
- C) translation: 2 units down
- D) reflection across the y-axis

8)



- A) reflection across $y = -x$
- B) translation: 2 units left and 2 units up
- C) rotation 180° about the origin
- D) translation: 3 units left and 3 units up

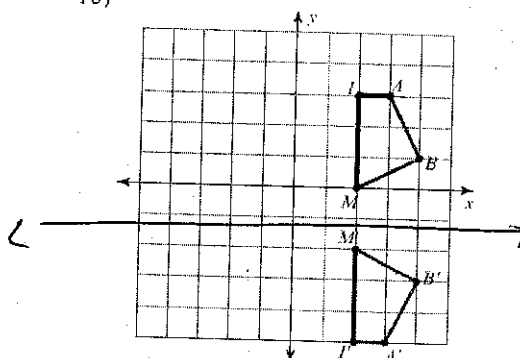
9)



- A) translation: 1 unit right and 4 units down
- B) rotation 90° counterclockwise about the origin
- C) rotation 180° about the origin
- D) translation: 5 units left

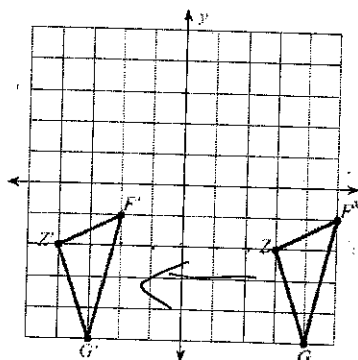
$$(0, -2) \rightarrow (0, 2)$$

10)



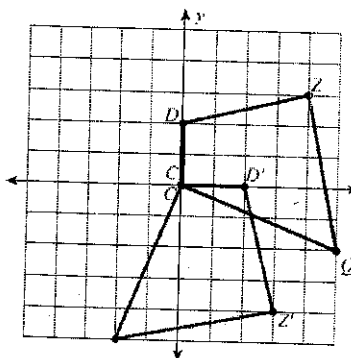
- A) reflection across $x = 2$
- B) translation: 5 units left and 2 units down
- C) reflection across $y = -1$
- D) reflection across $y = 2$

11)



- A) rotation 90° counterclockwise about the origin
- B) translation: 6 units left
- C) translation: 1 unit left and 3 units up
- D) translation: 7 units left

12)



- A) rotation 90° counterclockwise about the origin
- B) translation: 1 unit left and 2 units up
- C) rotation 180° about the origin
- D) rotation 90° clockwise about the origin