Geometry Name Key

Transformations Application Review

Date_____ Period____

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

1) rotation 180° about the origin
$Q(-3, -1)$, $R(0, 3)$, $S(0, 2)$, $T(1, 1)$

$Q'(3, 1)$, $R'(0, -3)$, $S'(0, -2)$, $T'(-1, -1)$

2) translation: 4 units left and 3 units up
$J(4, -3)$, $K(4, 1)$, $L(5, 1)$, $M(5, -4)$

$J'(0, 0)$, $K'(0, 4)$, $L'(1, 4)$, $M'(1, -1)$

3) translation: 2 units right and 4 units down
$E(-3, 1)$, $F(-3, 3)$, $G(-1, 2)$, $H(0, 2)$

$E'(-1, -3)$, $F'(-1, -1)$, $G'(1, -2)$, $H'(2, -2)$

4) reflection across the x-axis
$P(-4, 0)$, $Q(-4, 1)$, $R(-2, 1)$, $S(-1, -3)$

$Q'(-4, -1)$, $R'(-2, -1)$, $S'(-1, 3)$, $P'(-4, 0)$

5) reflection across $y = x$
$K(-1, 1)$, $L(0, 4)$, $M(5, 4)$, $N(2, 1)$

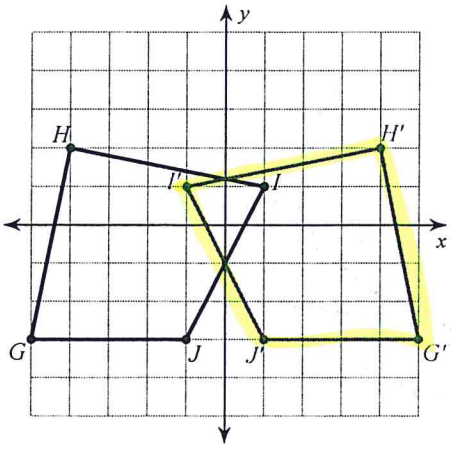
$L'(4, 0)$, $M'(4, 5)$, $N'(1, 2)$, $K'(1, -1)$

6) Stretch: Vertical factor of 1/3 Horizontal factor of 4.
A(2,6) B(3,6) C(5,9) D(6,9)

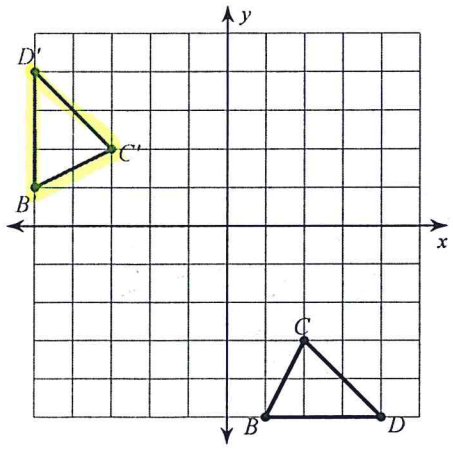
A'(8,2) B'(12,2) C'(20,3) D'(24,3)

Graph the image of the figure using the transformation given.

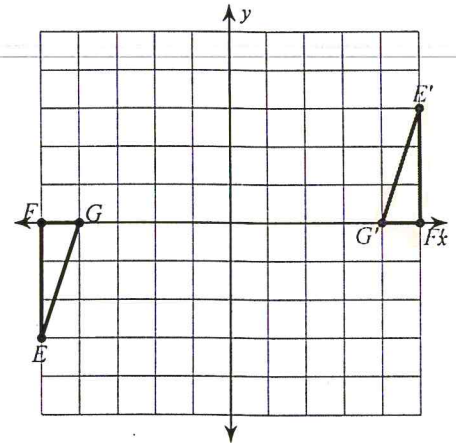
7) reflection across the y-axis



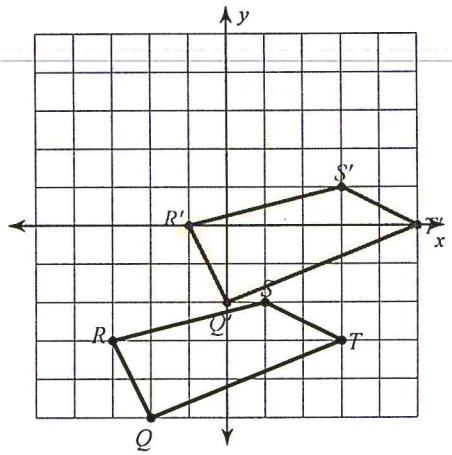
8) reflection across $y = x$



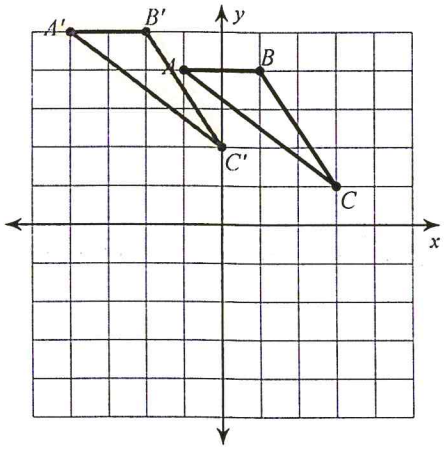
9) rotation 180° about the origin



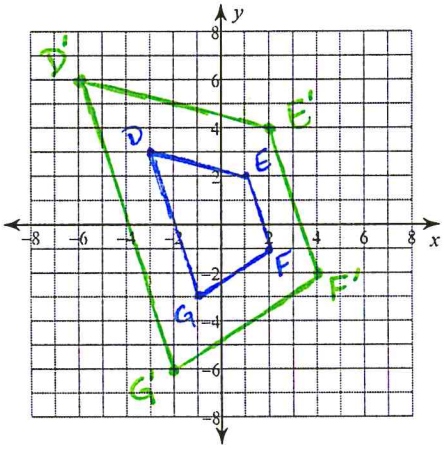
10) translation: 2 units right and 3 units up



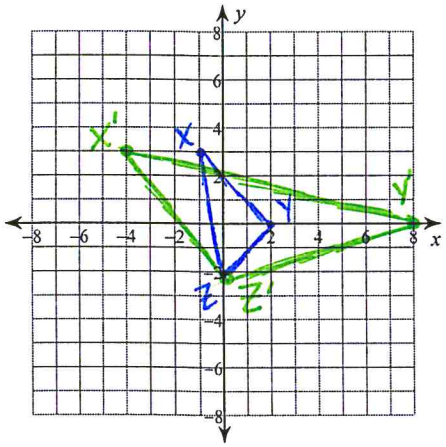
11) translation: 3 units left and 1 unit up



12) Dilation: scale factor of 2



13) Horizontal stretch: factor of 4



14) Vertical stretch: factor of 1/4