Geometry Name_____

Translations

Date_____ Block____

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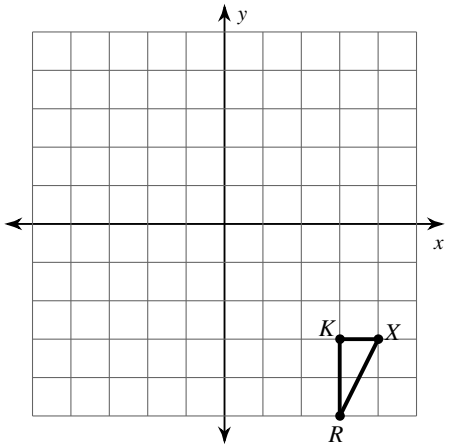
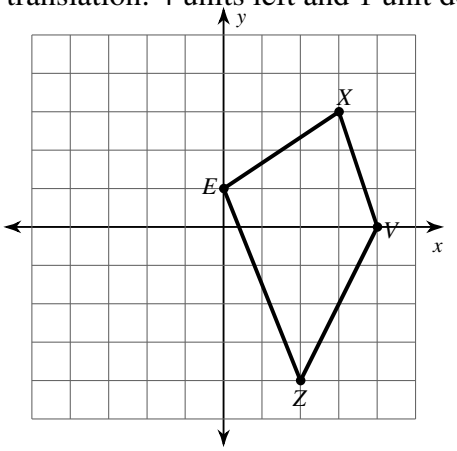
Find the coordinates of the vertices of each figure after the given transformation and then graph the image.

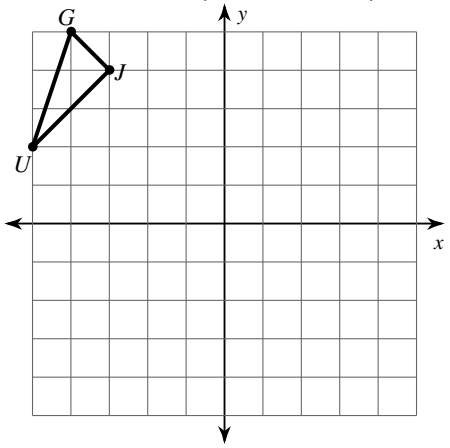
1) translation: 8 units left and 7 units up



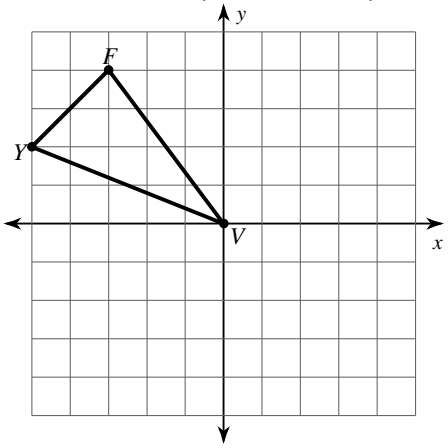
2) translation: 4 units left and 1 unit down



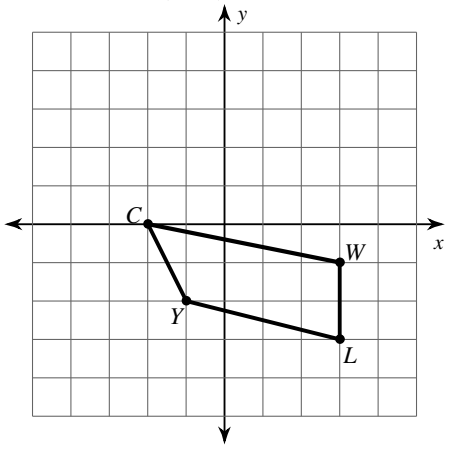
3) translation: $(x,\ y) \rightarrow (x + 6,\ y)$



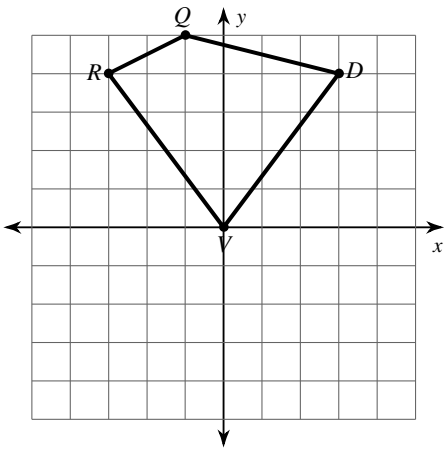
4) translation: $(x,\ y) \rightarrow (x + 3,\ y - 5)$



5) translation: $(0,\ 4)$



6) translation: $(1,\ -1)$



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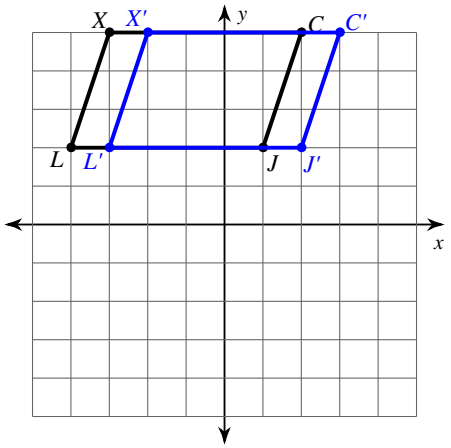
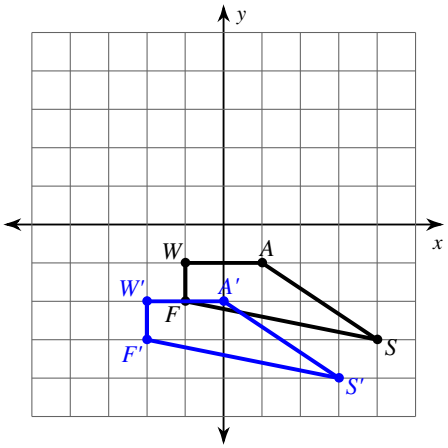
Write a rule to describe each transformation.

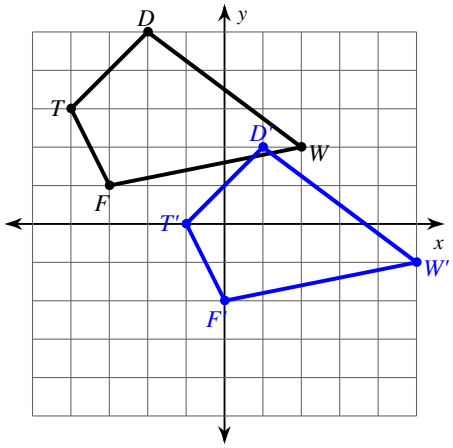
7)



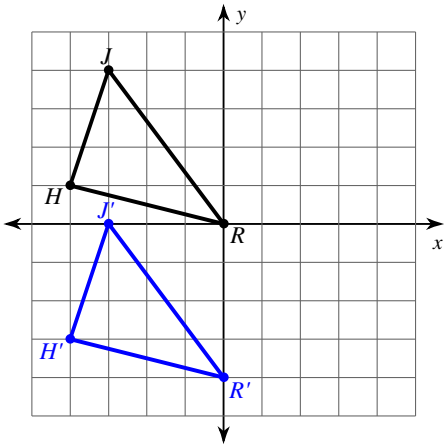
8)



9)



10)



11) $B(-2, -4)$, $W(-3, -2)$, $K(0, -4)$
to
$B'(-1, -2)$, $W'(-2, 0)$, $K'(1, -2)$

12) $I(-2, -3)$, $W(-3, 0)$, $X(1, -2)$
to
$I'(-1, -5)$, $W'(-2, -2)$, $X'(2, -4)$

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

13) translation: $(x, y) \rightarrow (x + 1, y + 5)$
$N(-4, -2)$, $V(-1, -1)$, $Q(-4, -5)$

14) translation: $(x, y) \rightarrow (x + 1, y)$
$D(-2, -2)$, $N(-3, 0)$, $K(0, 1)$, $R(2, -3)$

15) translation: $(x, y) \rightarrow (x - 2, y - 4)$
$X(-1, 1)$, $K(3, 3)$, $T(3, -1)$

16) translation: $(x, y) \rightarrow (x + 5, y + 1)$
$Z(-3, -4)$, $K(-2, -1)$, $I(0, -1)$

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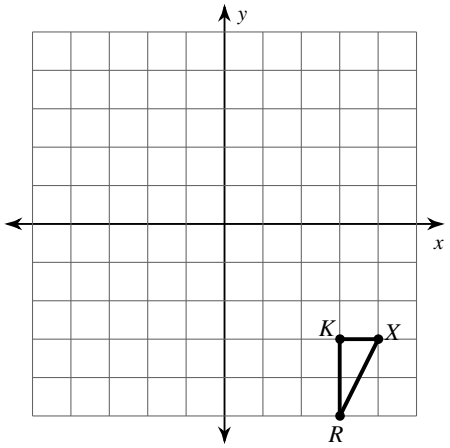
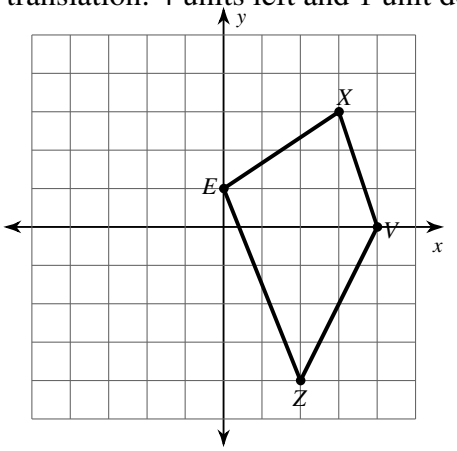
Find the coordinates of the vertices of each figure after the given transformation and then graph the image.

1) translation: 8 units left and 7 units up



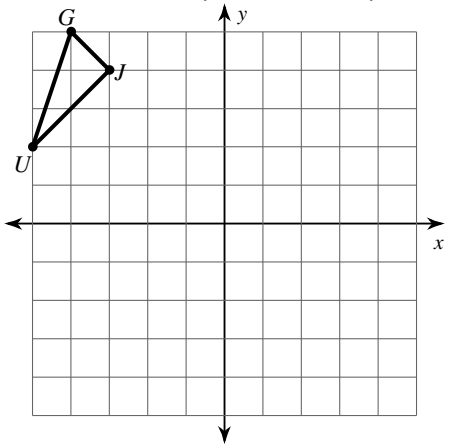
$R'(-5, 2), K'(-5, 4), X'(-4, 4)$

2) translation: 4 units left and 1 unit down



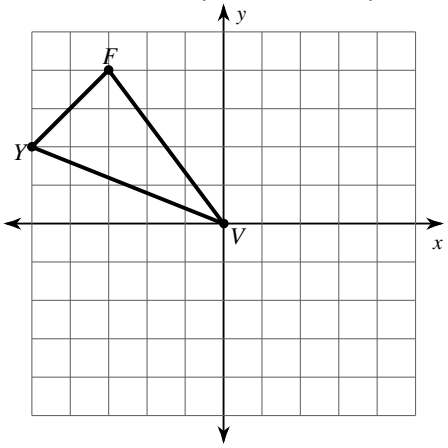
$Z'(-2, -5), E'(-4, 0), X'(-1, 2), V'(0, -1)$

3) translation: $(x, y) \rightarrow (x + 6, y)$



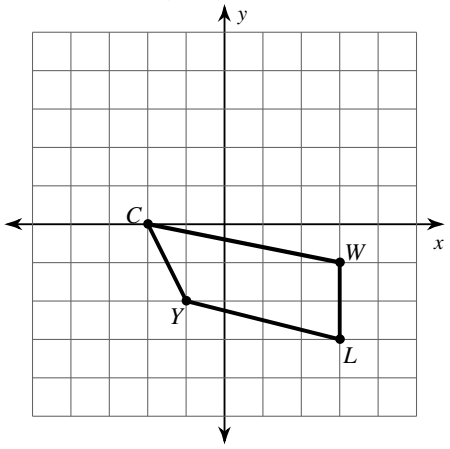
$U'(1, 2), G'(2, 5), J'(3, 4)$

4) translation: $(x, y) \rightarrow (x + 3, y - 5)$



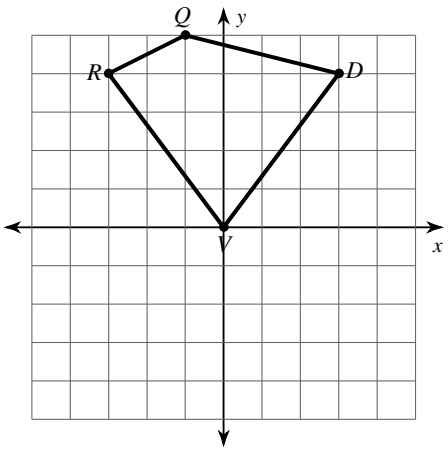
$Y'(-2, -3), F'(0, -1), V'(3, -5)$

5) translation: $(0, 4)$



$Y'(-1, 2), C'(-2, 4), W'(3, 3), L'(3, 1)$

6) translation: $(1, -1)$



$V'(1, -1), R'(-2, 3), Q'(0, 4), D'(4, 3)$

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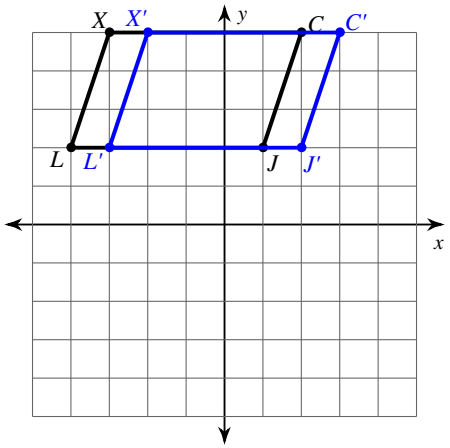
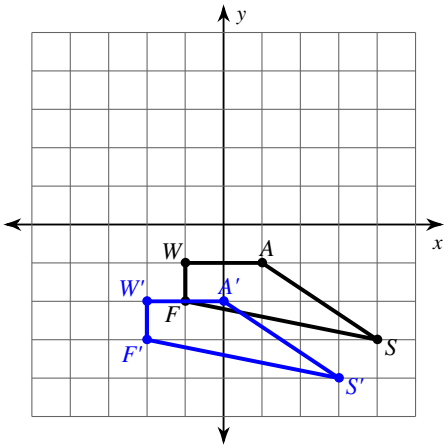
Write a rule to describe each transformation.

7)



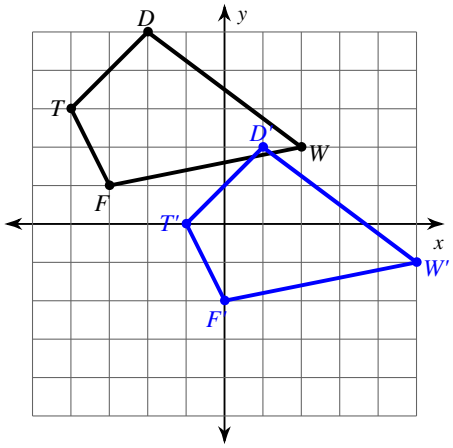
translation: $(x, y) \rightarrow (x + 1, y)$

8)



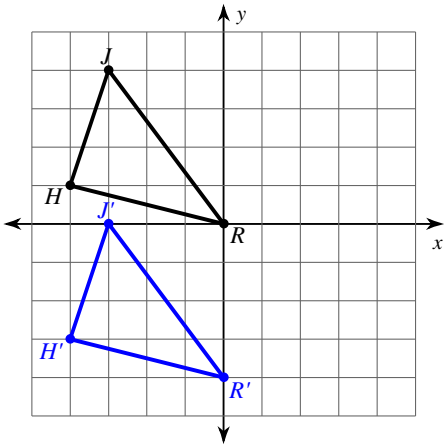
translation: $(x, y) \rightarrow (x - 1, y - 1)$

9)



translation: $(x, y) \rightarrow (x + 3, y - 3)$

10)



translation: $(x, y) \rightarrow (x, y - 4)$

11) $B(-2, -4)$, $W(-3, -2)$, $K(0, -4)$
to
$B'(-1, -2)$, $W'(-2, 0)$, $K'(1, -2)$

translation: $(x, y) \rightarrow (x + 1, y + 2)$

12) $I(-2, -3)$, $W(-3, 0)$, $X(1, -2)$
to
$I'(-1, -5)$, $W'(-2, -2)$, $X'(2, -4)$

translation: $(x, y) \rightarrow (x + 1, y - 2)$

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

13) translation: $(x, y) \rightarrow (x + 1, y + 5)$
$N(-4, -2)$, $V(-1, -1)$, $Q(-4, -5)$

$N'(-3, 3)$, $V'(0, 4)$, $Q'(-3, 0)$

14) translation: $(x, y) \rightarrow (x + 1, y)$
$D(-2, -2)$, $N(-3, 0)$, $K(0, 1)$, $R(2, -3)$

$D'(-1, -2)$, $N'(-2, 0)$, $K'(1, 1)$, $R'(3, -3)$

15) translation: $(x, y) \rightarrow (x - 2, y - 4)$
$X(-1, 1)$, $K(3, 3)$, $T(3, -1)$

$X'(-3, -3)$, $K'(1, -1)$, $T'(1, -5)$

16) translation: $(x, y) \rightarrow (x + 5, y + 1)$
$Z(-3, -4)$, $K(-2, -1)$, $I(0, -1)$

$Z'(2, -3)$, $K'(3, 0)$, $I'(5, 0)$

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