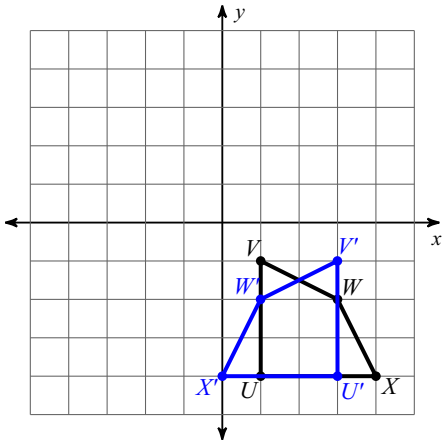
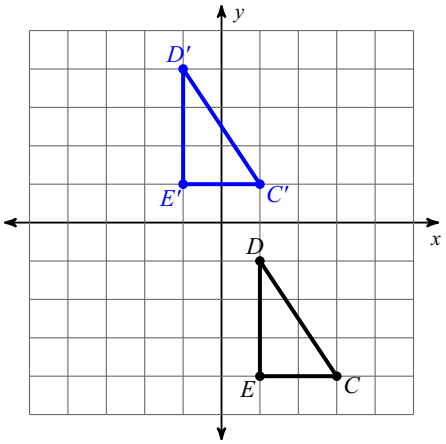
Write a rule to describe each transformation.

1)



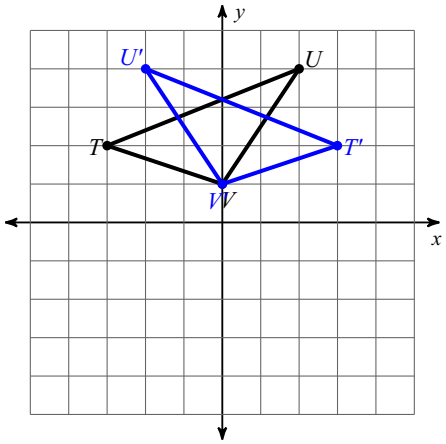
A) reflection across the x-axis
B) reflection across $x = 2$
C) translation: 1 unit right and 6 units up
D) reflection across $y = -2$

2)



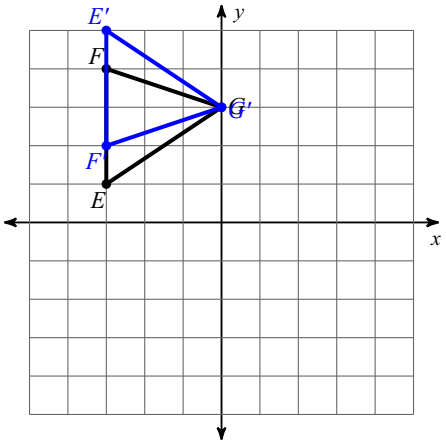
A) reflection across $y = -1$
B) translation: 2 units left and 5 units up
C) translation: 1 unit right and 4 units up
D) reflection across $x = -1$

3)



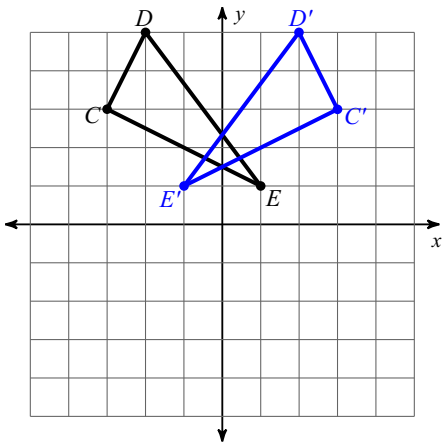
A) reflection across the y-axis
B) translation: 1 unit left and 6 units down
C) reflection across $y = 1$
D) translation: 3 units right

4)



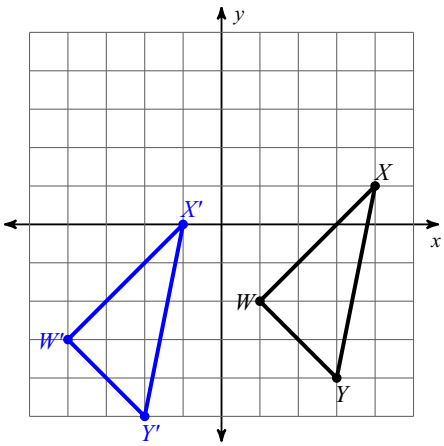
A) reflection across $x = -1$
B) reflection across $y = 3$
C) translation: 1 unit right and 6 units down
D) translation: 1 unit right and 2 units down

5)



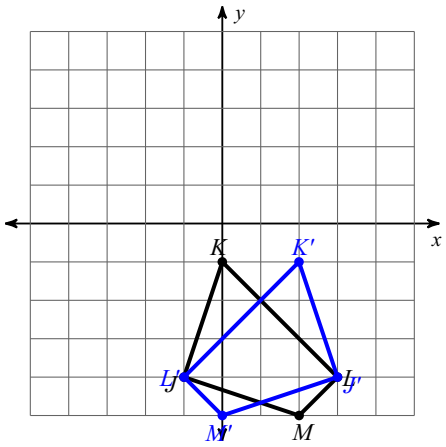
A) reflection across $x = -2$
B) translation: 2 units left and 3 units down
C) translation: 4 units right and 3 units down
D) reflection across the y-axis

6)



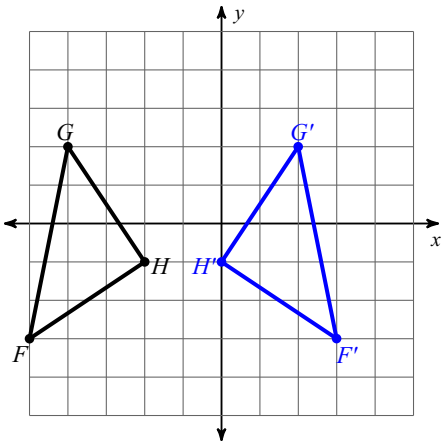
A) reflection across $y = -1$
B) translation: 4 units up
C) translation: 5 units left and 1 unit down
D) translation: 3 units left and 1 unit down

7)



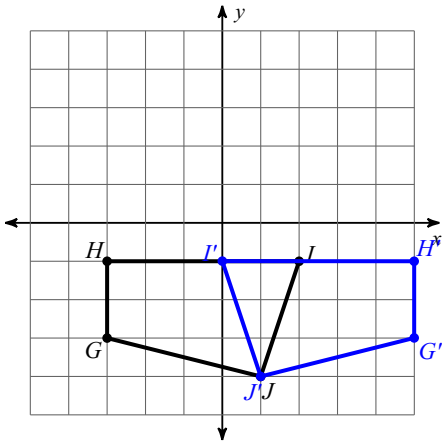
A) reflection across the x-axis
B) translation: 3 units left and 5 units up
C) reflection across $x = 1$
D) translation: 3 units left and 4 units up

8)



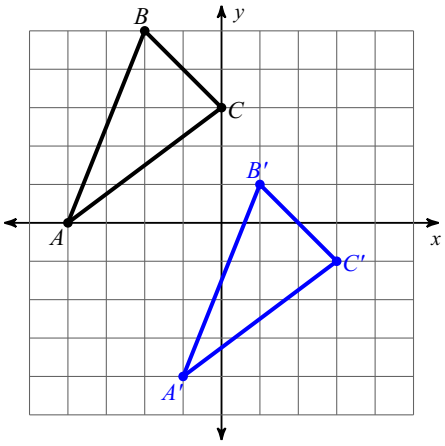
A) reflection across $y = 1$
B) reflection across $x = -1$
C) translation: 2 units right and 3 units up
D) translation: 1 unit up

9)



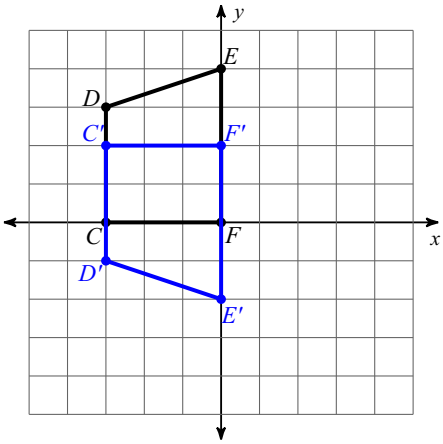
A) translation: 1 unit right and 3 units up
B) reflection across the y-axis
C) reflection across $x = 1$
D) translation: 2 units left and 4 units up

10)



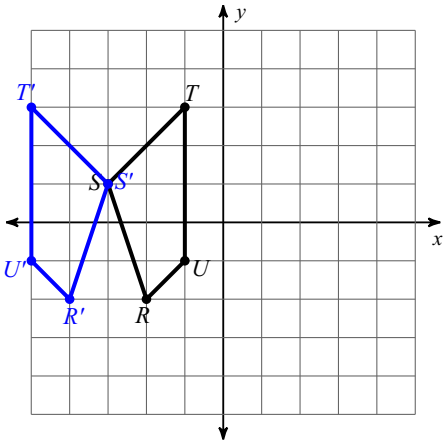
A) translation: 3 units right and 4 units down
B) reflection across $x = -1$
C) reflection across $x = -2$
D) translation: 5 units right

11)



A) translation: 3 units right and 5 units down
B) translation: 3 units right and 4 units down
C) reflection across $y = 1$
D) translation: 2 units left and 4 units down

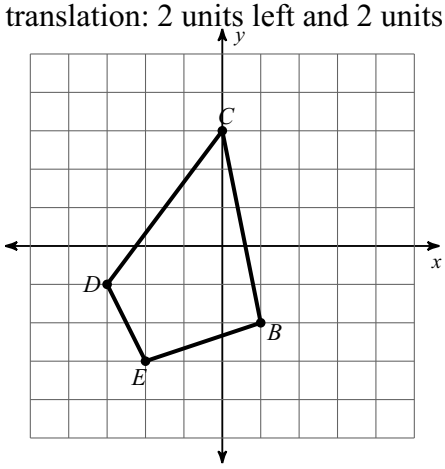
12)



A) translation: 1 unit left
B) reflection across $x = -3$
C) reflection across $x = 1$
D) reflection across $y = 1$

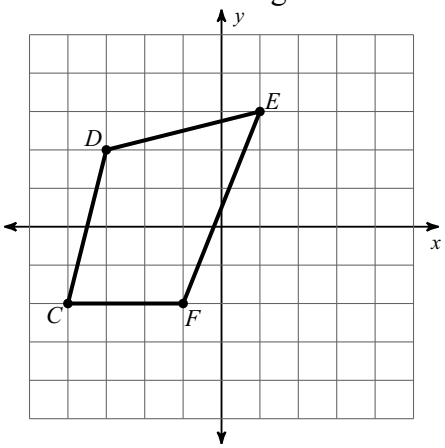
Find the coordinates of the vertices of each figure after the given transformation.

13) translation: 2 units left and 2 units down



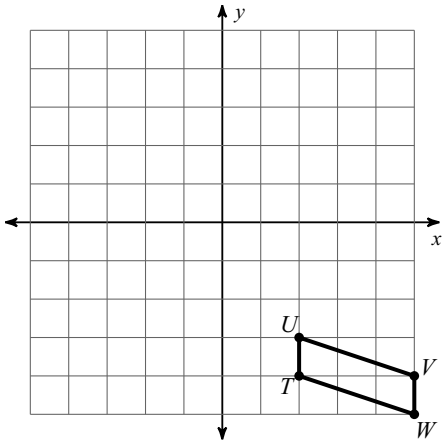
A) $D'(5, -1)$, $C'(2, 3)$, $B'(1, -2)$, $E'(4, -3)$
B) $D'(-1, -1)$, $C'(-4, 3)$, $B'(-5, -2)$, $E'(-2, -3)$
C) $E'(-4, -5)$, $D'(-5, -3)$, $C'(-2, 1)$, $B'(-1, -4)$
D) $E'(2, -2)$, $D'(1, 0)$, $C'(4, 4)$, $B'(5, -1)$

14) translation: 2 units right



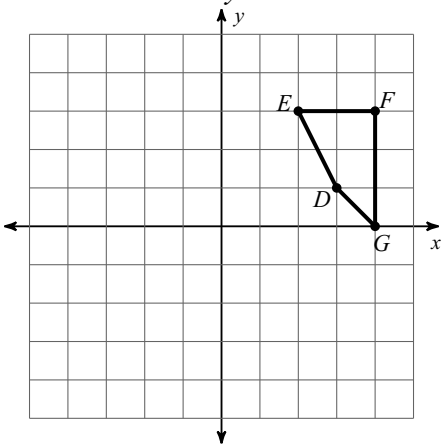
A) $C'(-5, -5)$, $D'(-4, -1)$, $E'(0, 0)$, $F'(-2, -5)$
B) $C'(-2, -2)$, $D'(-1, 2)$, $E'(3, 3)$, $F'(1, -2)$
C) $D'(-3, -2)$, $E'(1, -3)$, $F'(-1, 2)$, $C'(-4, 2)$
D) $C'(-4, 0)$, $D'(-3, 4)$, $E'(1, 5)$, $F'(-1, 0)$

15) reflection across $x = 1$



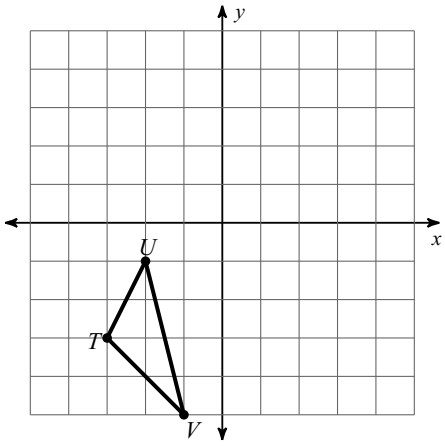
A) $U'(0, -3)$, $V'(-3, -4)$, $W'(-3, -5)$, $T'(0, -4)$
B) $T'(0, 1)$, $U'(0, 2)$, $V'(3, 1)$, $W'(3, 0)$
C) $T'(-5, 1)$, $U'(-5, 2)$, $V'(-2, 1)$, $W'(-2, 0)$
D) $T'(-2, 3)$, $U'(-2, 4)$, $V'(1, 3)$, $W'(1, 2)$

16) reflection across $y = 2$



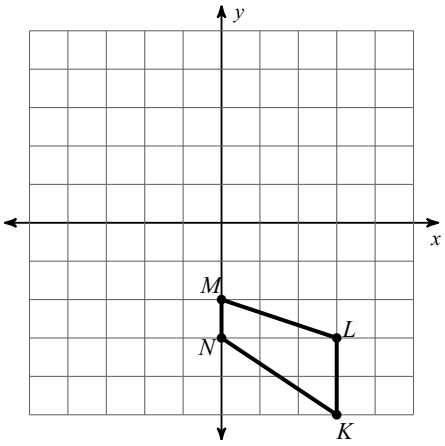
A) $D'(2, 0)$, $E'(1, 2)$, $F'(3, 2)$, $G'(3, -1)$
B) $E'(2, 1)$, $F'(4, 1)$, $G'(4, 4)$, $D'(3, 3)$
C) $E'(2, -1)$, $F'(4, -1)$, $G'(4, 2)$, $D'(3, 1)$
D) $E'(0, 3)$, $F'(-2, 3)$, $G'(-2, 0)$, $D'(-1, 1)$

17) reflection across $x = -3$



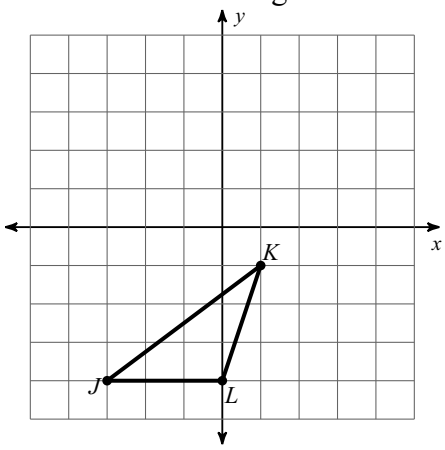
A) $U'(-2, -3)$, $V'(-1, 1)$, $T'(-3, -1)$
B) $T'(1, -3)$, $U'(2, -1)$, $V'(3, -5)$
C) $U'(2, -1)$, $V'(1, -5)$, $T'(3, -3)$
D) $U'(-4, -1)$, $V'(-5, -5)$, $T'(-3, -3)$

18) reflection across $x = 2$



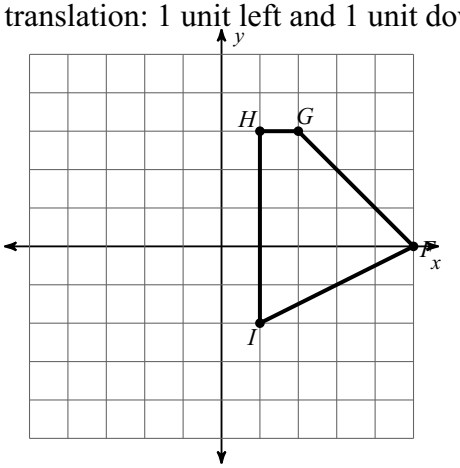
A) $N'(-4, 3)$, $M'(-4, 4)$, $L'(-1, 3)$, $K'(-1, 1)$
B) $N'(-5, 3)$, $M'(-5, 4)$, $L'(-2, 3)$, $K'(-2, 1)$
C) $M'(4, -2)$, $L'(1, -3)$, $K'(1, -5)$, $N'(4, -3)$
D) $N'(-4, -1)$, $M'(-4, 0)$, $L'(-1, -1)$, $K'(-1, -3)$

19) translation: 2 units right and 3 units up



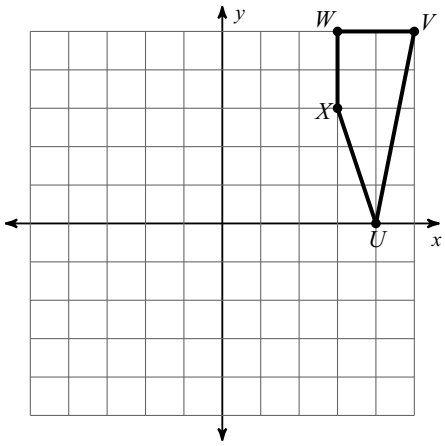
A) $J'(-1, -1), K'(3, 2), L'(2, -1)$
B) $J'(-1, 2), K'(3, 5), L'(2, 2)$
C) $K'(1, -5), L'(0, -2), J'(-3, -2)$
D) $J'(1, -5), K'(5, -2), L'(4, -5)$

20) translation: 1 unit left and 1 unit down



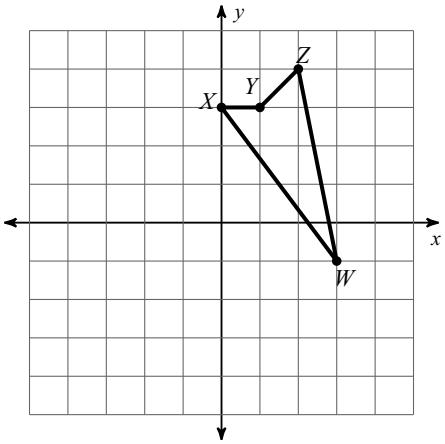
A) $I'(0, -3), H'(0, 2), G'(1, 2), F'(4, -1)$
B) $I'(-3, -3), H'(-3, 2), G'(-2, 2), F'(1, -1)$
C) $H'(1, -5), G'(2, -5), F'(5, -2), I'(1, 0)$
D) $H'(1, -1), G'(2, -1), F'(5, 2), I'(1, 4)$

21) reflection across the x-axis



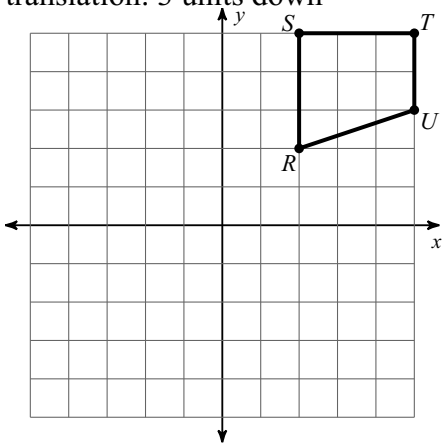
A) $X'(-3, 3), W'(-3, 5), V'(-1, 5), U'(-2, 0)$
B) $W'(-1, 5), V'(-3, 5), U'(-2, 0), X'(-1, 3)$
C) $X'(-1, 1), W'(-1, 3), V'(1, 3), U'(0, -2)$
D) $W'(3, -5), V'(5, -5), U'(4, 0), X'(3, -3)$

22) reflection across $x = 1$



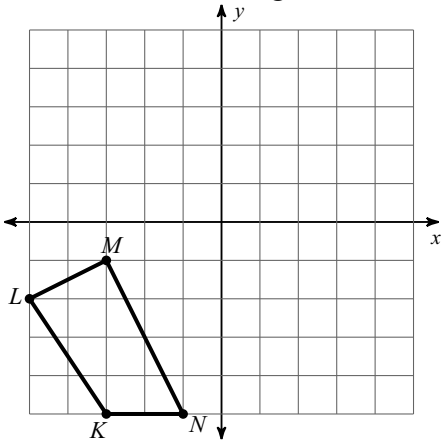
A) $X'(2, 3), Y'(1, 3), Z'(0, 4), W'(-1, -1)$
B) $W'(-1, -4), X'(-4, 0), Y'(-3, 0), Z'(-2, 1)$
C) $W'(3, -4), X'(0, 0), Y'(1, 0), Z'(2, 1)$
D) $X'(0, 1), Y'(1, 1), Z'(2, 0), W'(3, 5)$

23) translation: 3 units down



A) $R'(-1, 1), S'(-1, 4), T'(2, 4), U'(2, 2)$
B) $R'(2, -1), S'(2, 2), T'(5, 2), U'(5, 0)$
C) $R'(-3, -2), S'(-3, 1), T'(0, 1), U'(0, -1)$
D) $S'(2, -1), T'(5, -1), U'(5, 1), R'(2, 2)$

24) translation: 4 units right and 4 units up



A) $K'(1, -3), L'(-1, 0), M'(1, 1), N'(3, -3)$
B) $K'(0, -1), L'(-2, 2), M'(0, 3), N'(2, -1)$
C) $K'(1, -1), L'(-1, 2), M'(1, 3), N'(3, -1)$
D) $K'(-3, -1), L'(-5, 2), M'(-3, 3), N'(-1, -1)$