

"Name the Rule"

Date \_\_\_\_\_ Period \_\_\_\_\_

Select the rule to describe each transformation.

1)  $C(-2, -1)$  to  $C'(-2, -2)$

No constant change

- ~~A) reflection across  $y = x$~~
  - ~~B) reflection across  $y = 3$~~
  - ~~C) translation: 3 units left and 6 units up~~
  - D) translation: 1 unit down
- x - doesn't change*

2)  $J(-2, 3)$  to  $J'(-5, 1)$

- A) translation: 7 units right and 1 unit down
- B) reflection across  $y = x$
- C) translation: 4 units right and 5 units down
- D) translation: 3 units left and 2 units down

3)  $E(2, -2)$  to  $E'(-2, 2)$  *places swap*

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

4)  $E(1, 5)$  to  $E'(-5, -1)$  *places swap signs change*

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

5)  $I(5, 1)$  to  $I'(-3, 3)$

- A) translation:  $(x, y) \rightarrow (x - 8, y)$
- B) reflection across  $x = 1$
- C) translation:  $(x, y) \rightarrow (\underline{x - 8}, \underline{y + 2})$
- D) reflection across  $y = -x$

6)  $E(-5, -2)$  to  $E'(-5, 2)$  *y-coordinate changes*

- A) reflection across  $y = -x$
- B) reflection across  $x = -1$
- C) reflection across the x-axis
- D) translation:  $(x, y) \rightarrow (x + 5, y + 5)$

7)  $V(-3, 2)$  to  $V'(3, 2)$

A) translation:  $(x, y) \rightarrow (x + 7, y + 3)$

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

C) reflection across the y-axis

D) reflection across  $y = 1$

*x-coordinate changes*

8)  $Q(-4, -4)$  to  $Q'(-1, 1)$

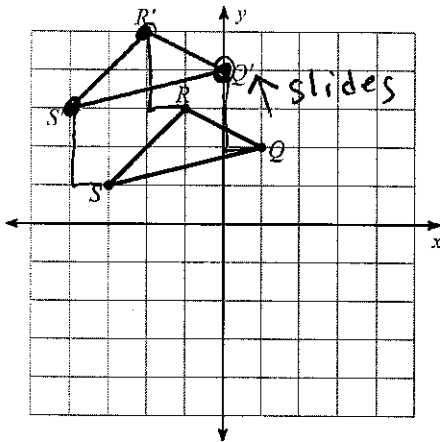
A) translation:  $(x, y) \rightarrow (x + 3, y + 5)$

B) reflection across  $y = -x$

C) reflection across  $y = -1$

D) translation:  $(x, y) \rightarrow (x + 7, y + 6)$

9)



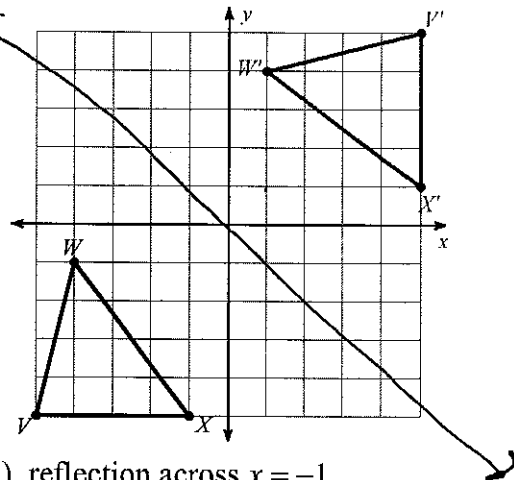
A) reflection across the y-axis

B) translation: 4 units down

C) translation: 1 unit left and 2 units up

D) translation: 1 unit right and 5 units down

10)



A) reflection across  $x = -1$

B) translation: 5 units right and 5 units up

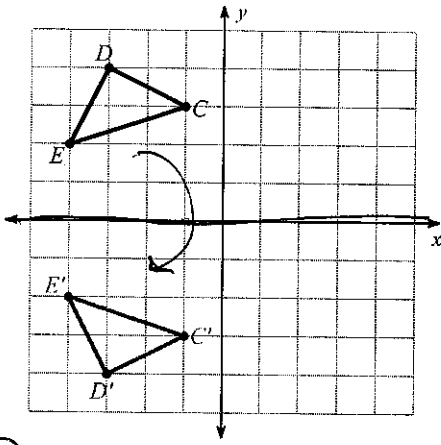
C) reflection across  $y = -x$

D) reflection across  $y = -3$

*Test Point:  $(-4, -1) \rightarrow (1, 4)$*

*swap places + change signs*

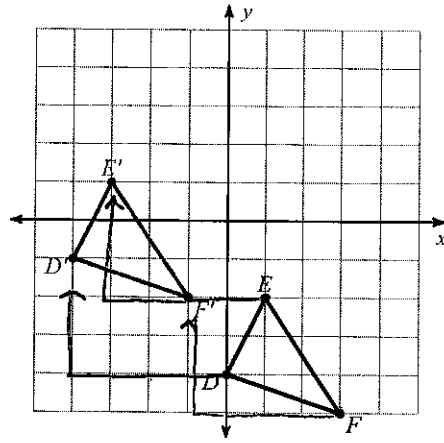
11)



- (A) reflection across the x-axis
- B) translation: 3 units right and 1 unit up
- C) translation: 4 units right and 4 units down
- D) translation: 4 units right

Test Point :  $(-4, 2) \rightarrow (-4, -2)$   
*y*-coordinate changes ✓

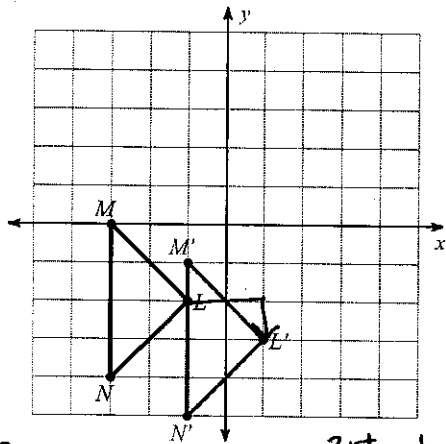
12)



- A) translation: 4 units left and 6 units up
- B) translation: 3 units left and 2 units up
- (C) translation: 4 units left and 3 units up
- D) translation: 1 unit right and 5 units up

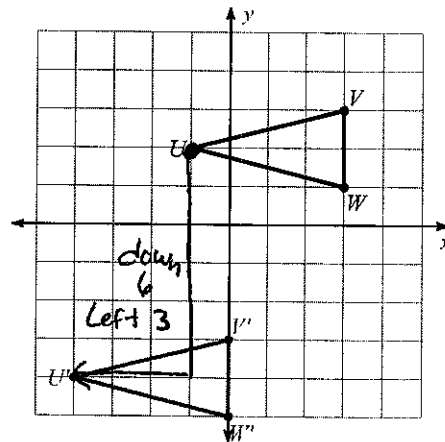
★ Notice pre-image vs. image

13)



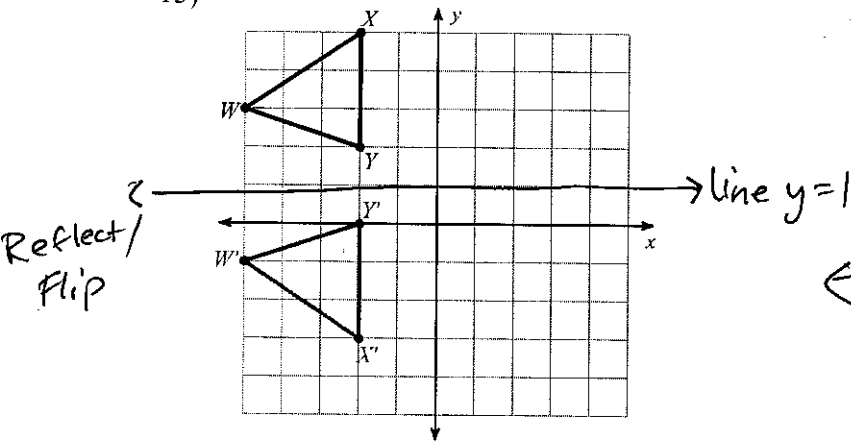
- (A) translation:  $(x, y) \rightarrow (x+2, y-1)$  *2rt 1down*
- B) reflection across  $y = x$
- C) translation:  $(x, y) \rightarrow (x+3, y+5)$
- D) translation:  $(x, y) \rightarrow (x+1, y)$

14)



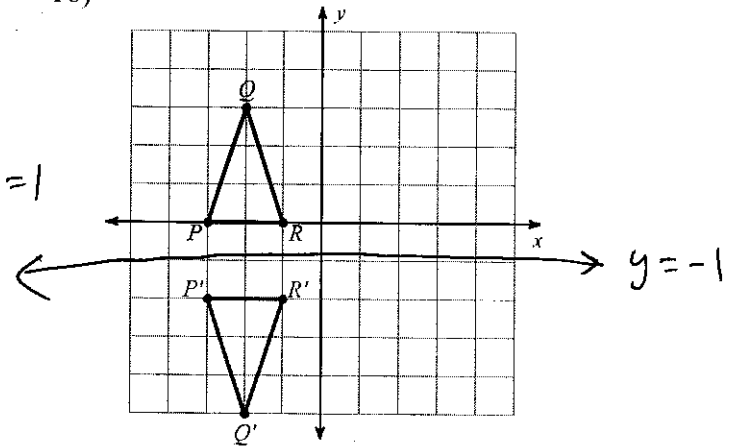
- A) reflection across  $y = -x$
- B) reflection across the x-axis
- C) translation:  $(x, y) \rightarrow (x-1, y-3)$
- (D) translation:  $(x, y) \rightarrow (x-3, y-6)$

15)



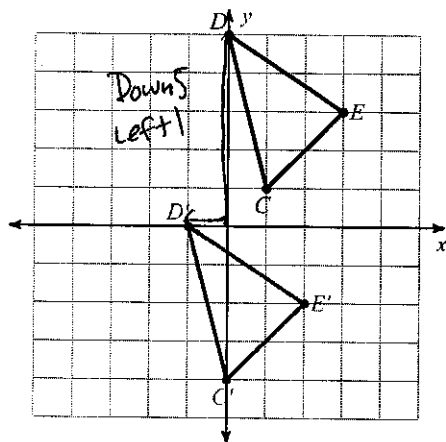
- A) translation:  $(x, y) \rightarrow (x + 3, y - 3)$
- B) translation:  $(x, y) \rightarrow (x + 5, y - 3)$
- C) translation:  $(x, y) \rightarrow (x + 7, y - 3)$
- D) reflection across  $y = 1$

16)



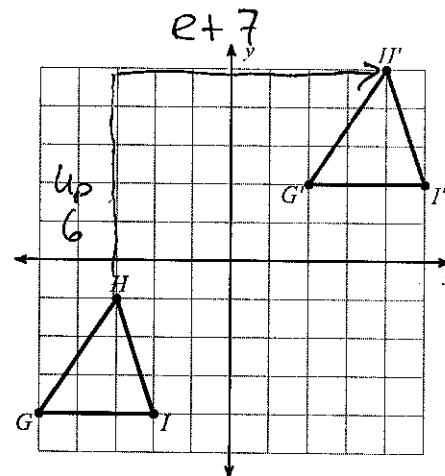
- A) reflection across the y-axis
- B) translation:  $(x, y) \rightarrow (x - 1, y - 5)$
- C) translation:  $(x, y) \rightarrow (x + 5, y - 4)$
- D) reflection across  $y = -1$

17)



- A) translation:  $(x, y) \rightarrow (x + 1, y - 6)$
- B) translation:  $(x, y) \rightarrow (x - 1, y - 5)$
- C) reflection across  $y = -x$
- D) reflection across  $x = 2$

18)



- A) reflection across  $y = -x$
- B) reflection across the x-axis
- C) translation:  $(x, y) \rightarrow (x + 7, y + 6)$
- D) reflection across  $x = -2$