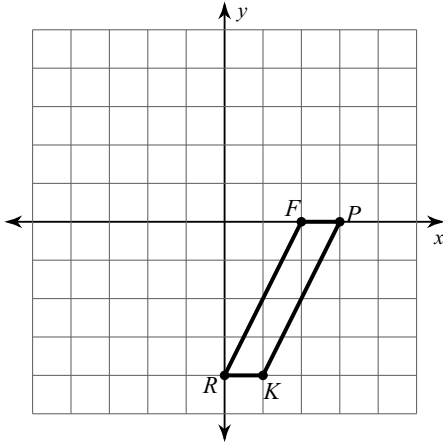
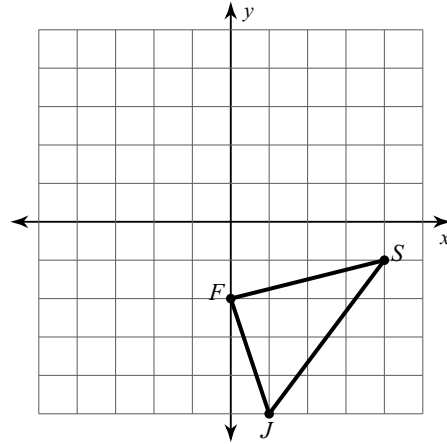


**Graph the image of the figure using the transformation given.**

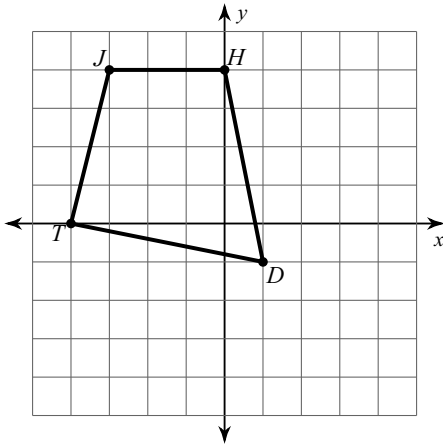
1) reflection across the y-axis



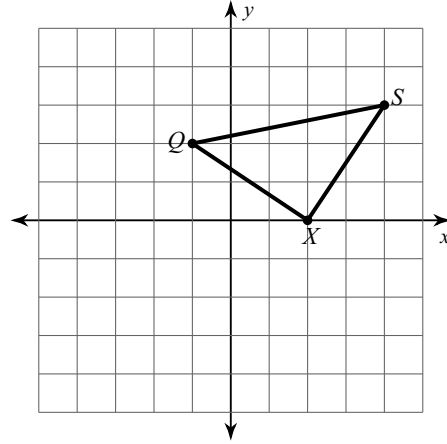
2) reflection across the x-axis



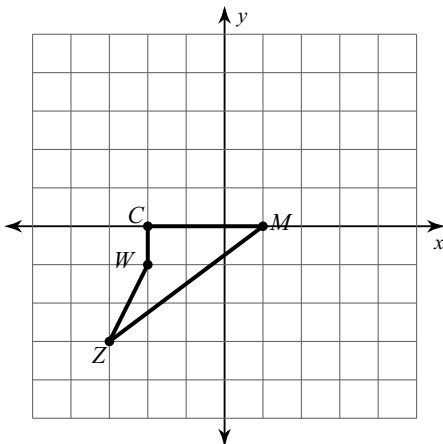
3) reflection across  $y = 2$



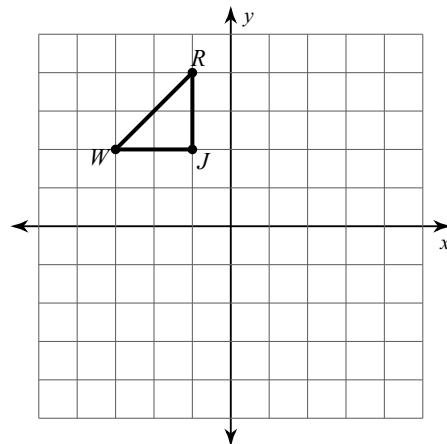
4) reflection across the x-axis



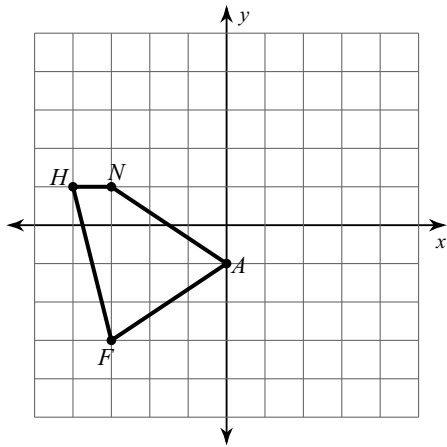
5) reflection across  $y = 1$



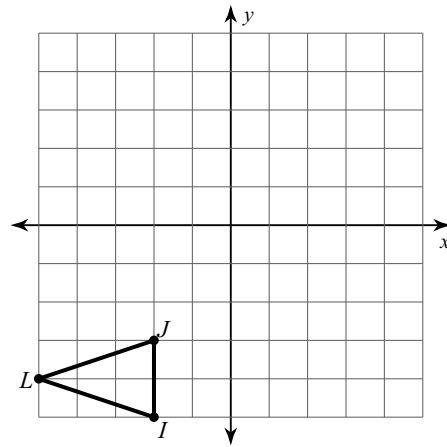
6) reflection across  $y = x$



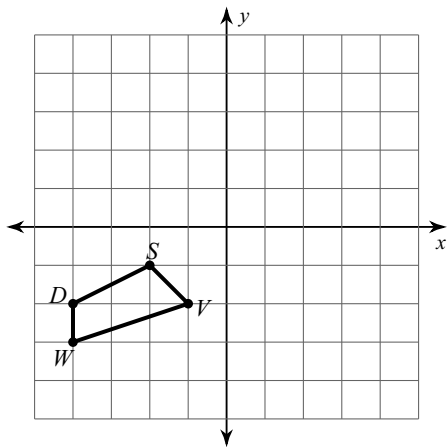
7) translation:  $(x, y) \rightarrow (x + 2, y - 1)$



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

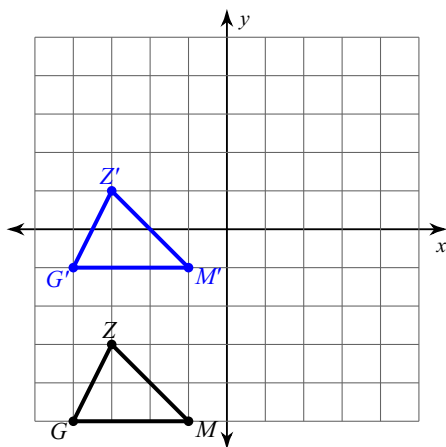


9) translation:  $(x, y) \rightarrow (x + 5, y + 3)$

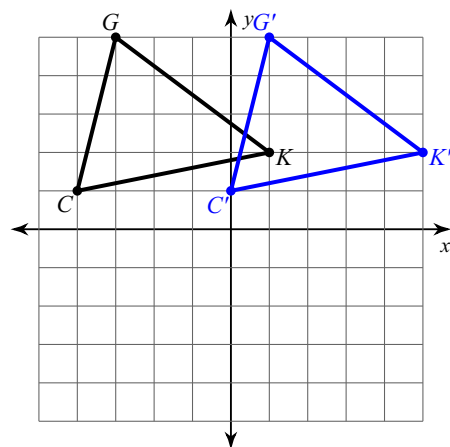


**Write a rule to describe each transformation.**

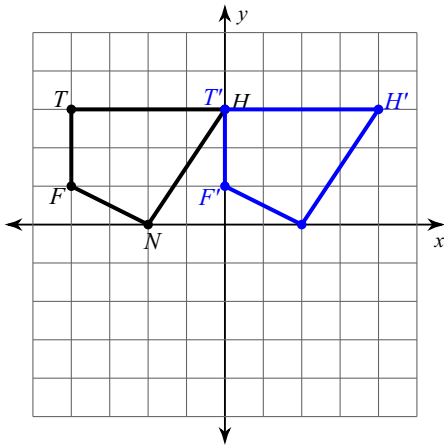
10)



11)

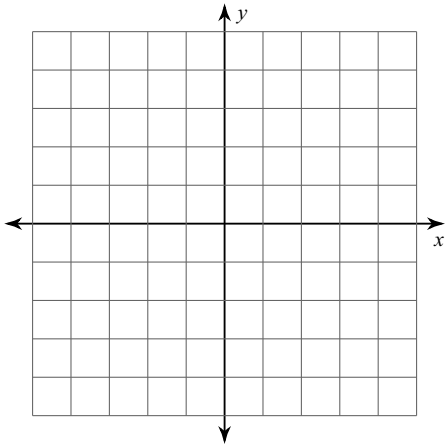


12)

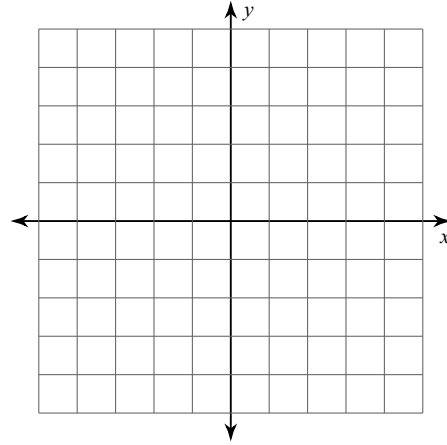


**Graph the image of the figure using the transformation given.**

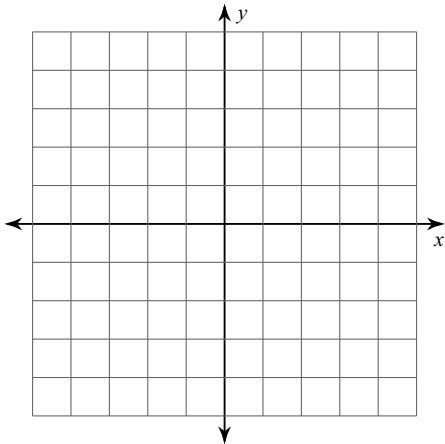
- 13) rotation  $90^\circ$  counterclockwise about the origin  
 $Y(2, -2), C(5, -1), I(3, -3)$



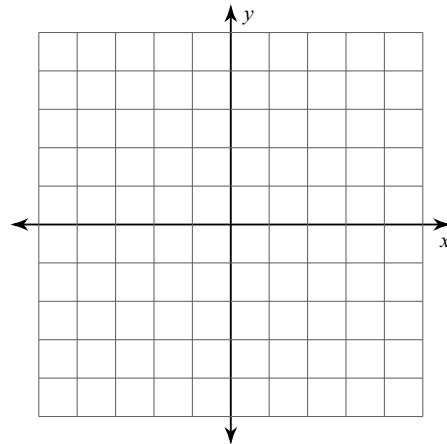
- 14) rotation  $180^\circ$  about the origin  
 $A(-4, -5), P(-4, -3), I(-1, 0), N(0, -5)$



- 15) rotation  $180^\circ$  about the origin  
 $S(-4, 0), N(-3, 5), F(0, 5), J(0, 0)$

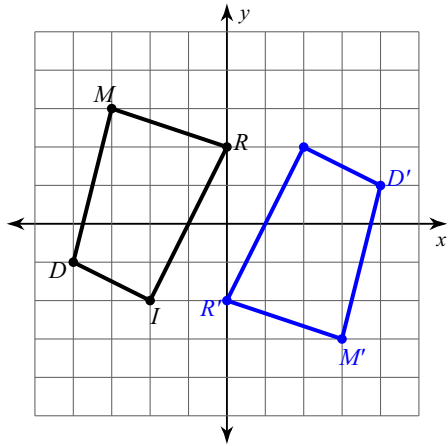


- 16) rotation  $90^\circ$  counterclockwise about the origin  
 $J(-1, 1), K(-2, 3), R(3, 2), T(2, -2)$

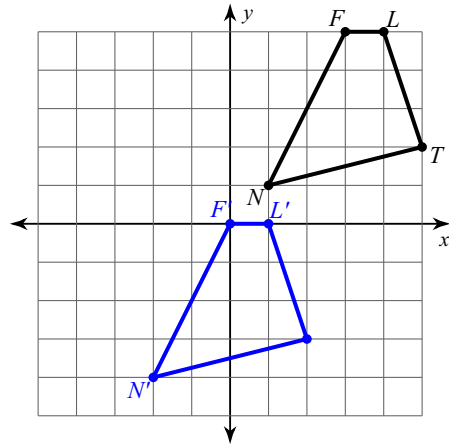


Write a rule to describe each transformation.

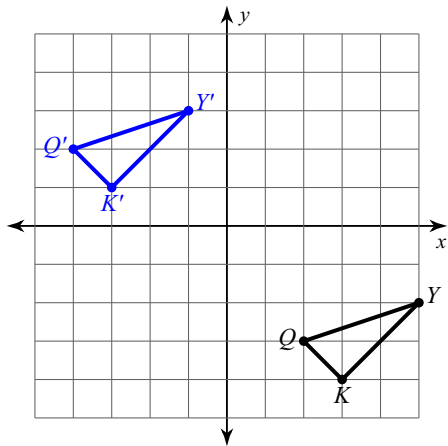
17)



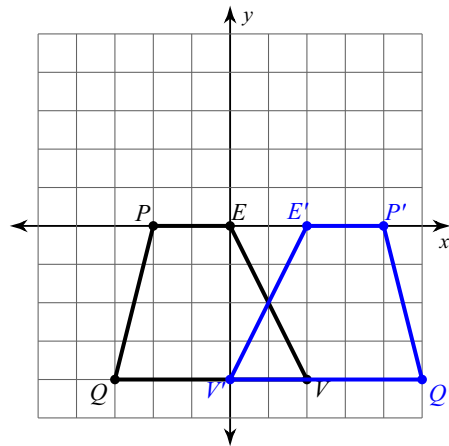
18)



19)

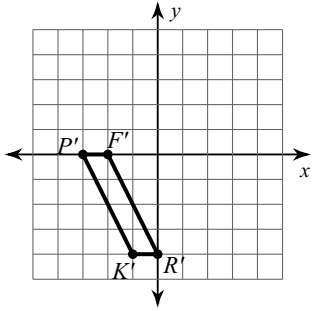


20)

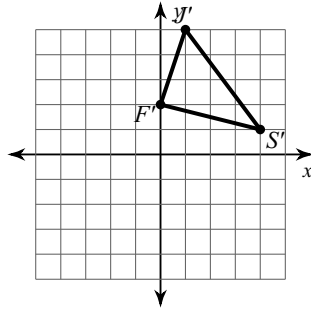


# Answers to (ID: 1)

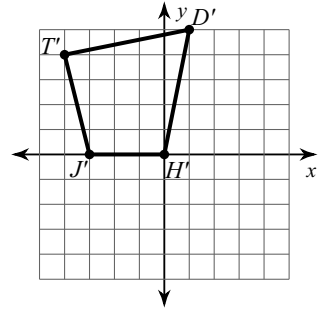
1)



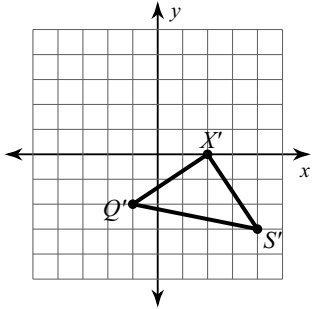
2)



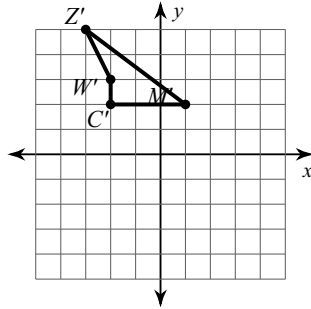
3)



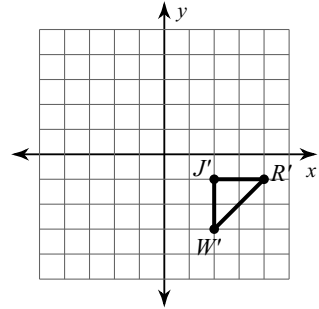
4)



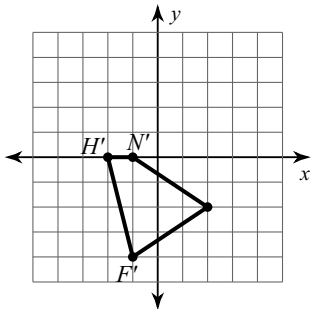
5)



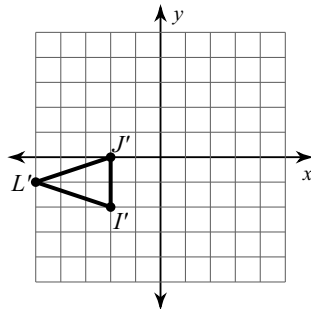
6)



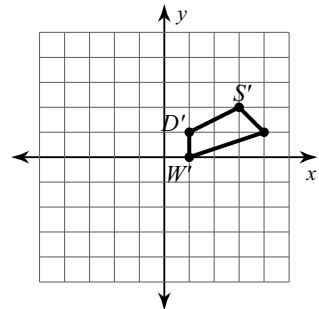
7)



8)



9)

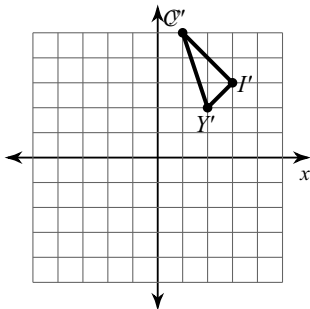


10) translation: 4 units up

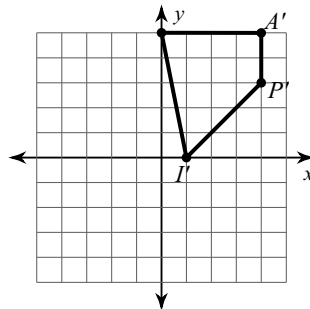
11) translation: 4 units right

12) translation: 4 units right

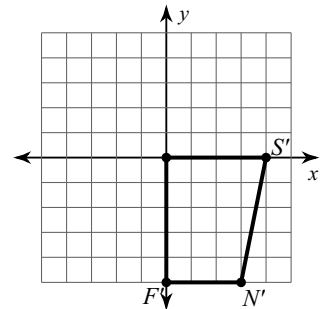
13)



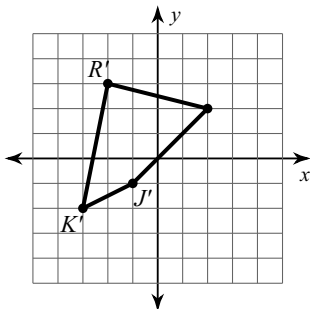
14)



15)



16)



17) rotation  $180^\circ$  about the origin

18) translation: 3 units left and 5 units down

19) translation: 6 units left and 5 units up

20) reflection across  $x = 1$