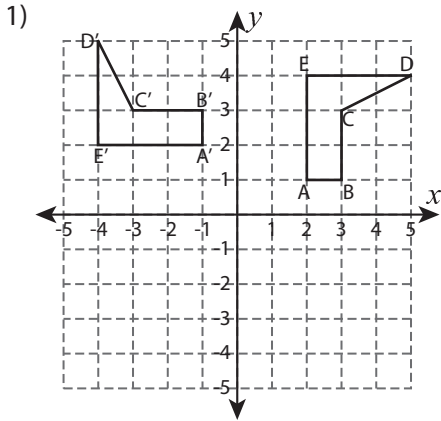
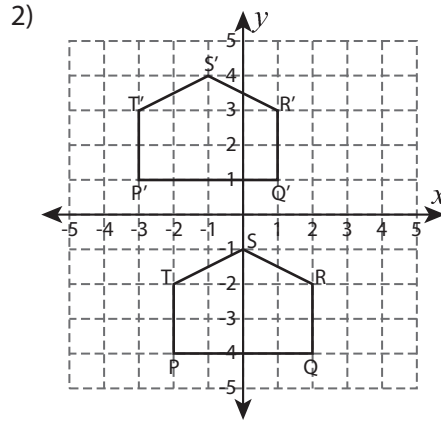


# Transformation of Shapes

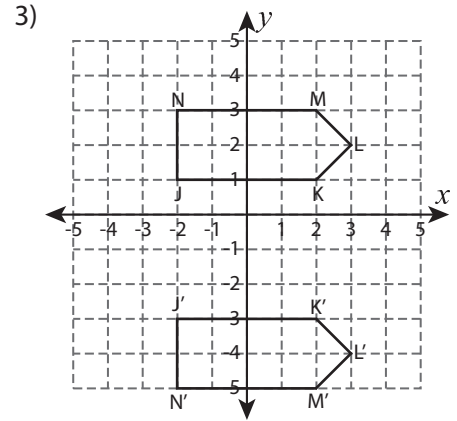
Recognize how each shape has transformed. Write translation, reflection or rotation.



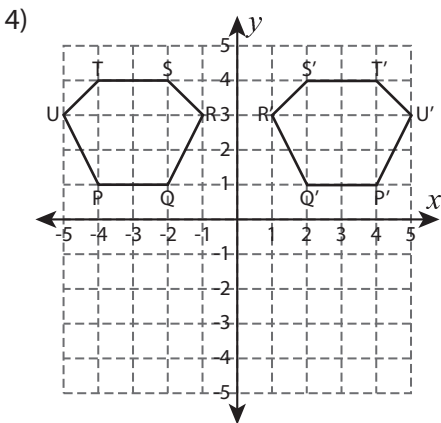
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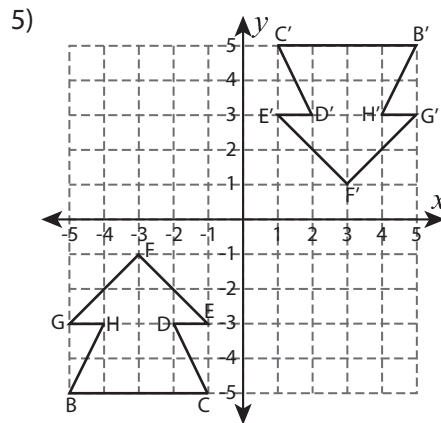
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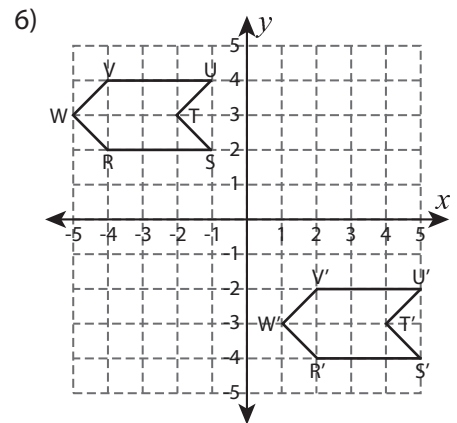
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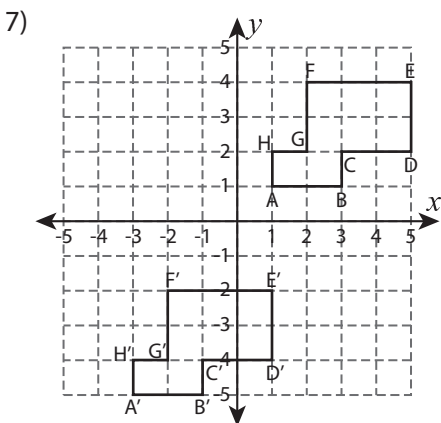
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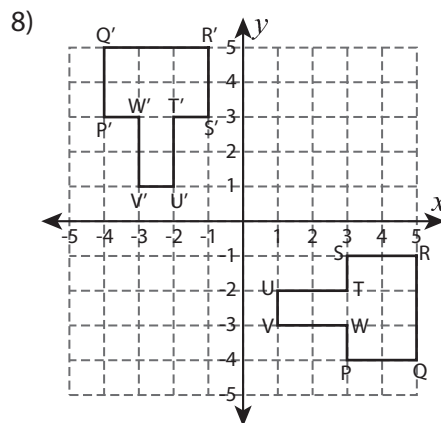
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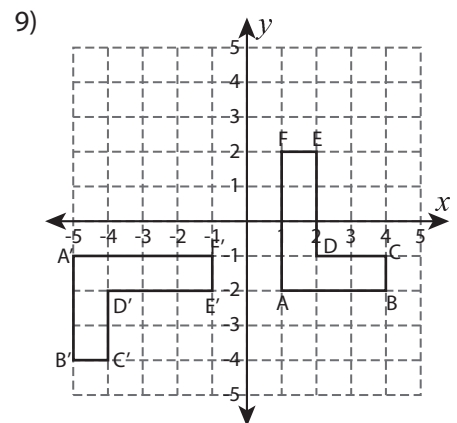
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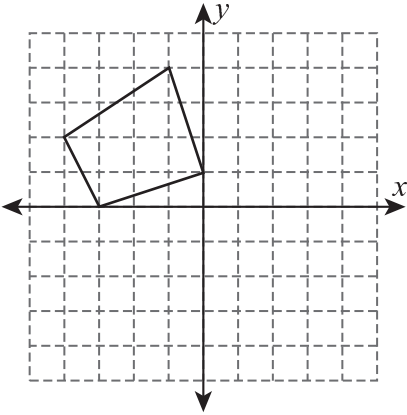
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## Translation of Quadrilaterals

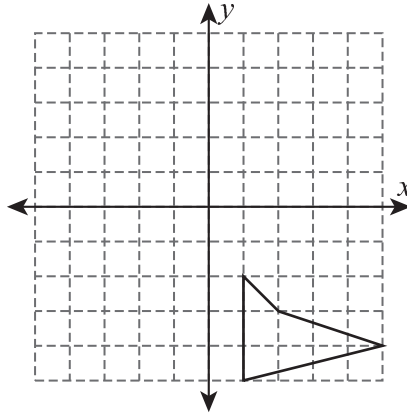
Sheet 2

Graph the image of each quadrilateral using the translation given.

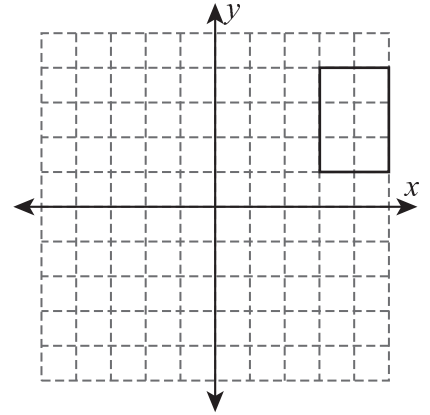
1) 2 units right and 3 units down



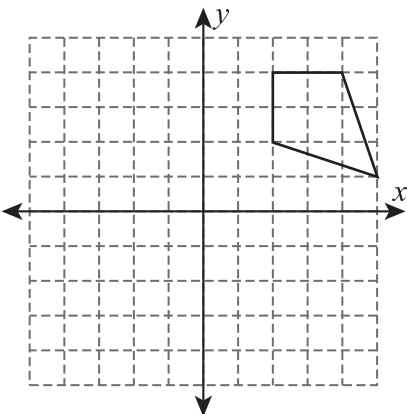
2) 5 units left and 7 units up



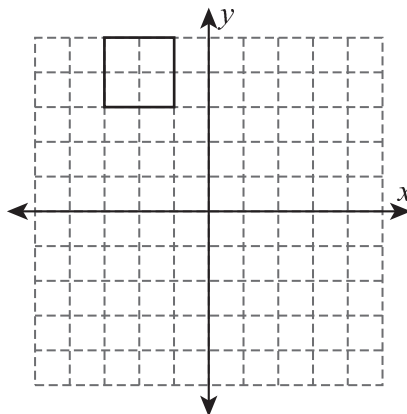
3) 4 units down and 2 units left



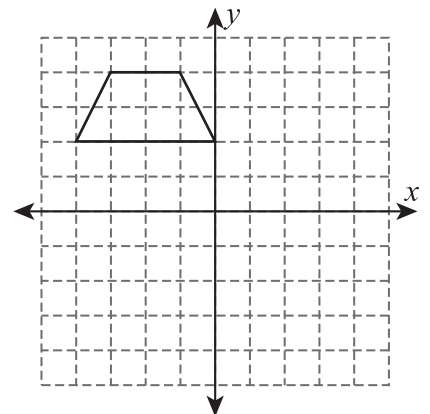
4) 1 unit up and 7 units left



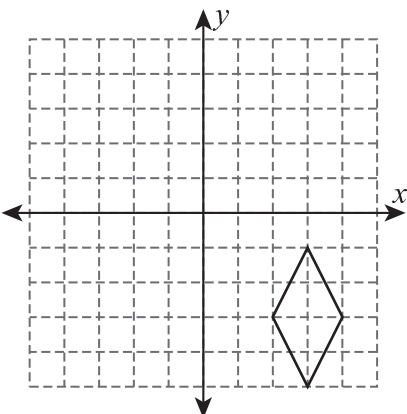
5) 8 units down and 6 units right



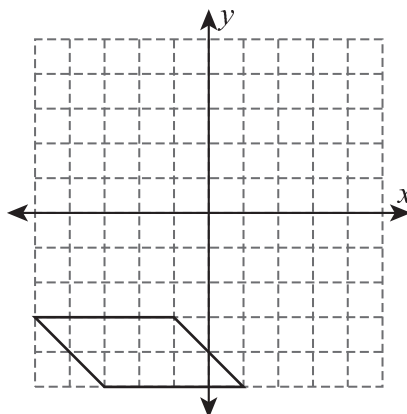
6) 1 unit left and 5 units down



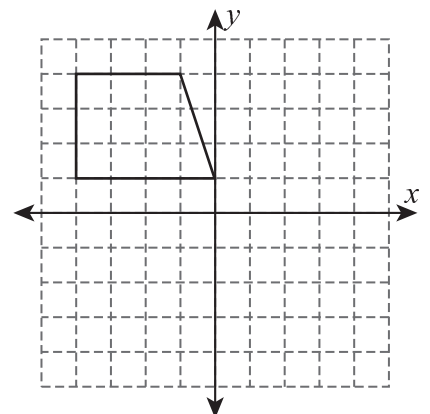
7) 6 units left and 2 units up



8) 3 units right and 8 units up



































9) 4 units right



## Rotation of Shapes - Multiple Choice

Sheet 1

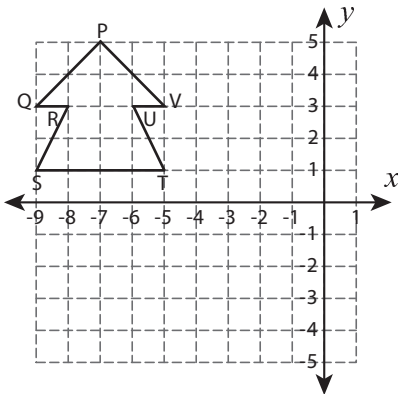
- 1) Which one of the following is a  $90^\circ$  clockwise rotation of  about the origin?
- a)       b)       c) 
- 2) Which one of the following is a  $90^\circ$  counterclockwise rotation of  about the origin?
- a)       b)       c) 
- 3) Which one of the following is a  $180^\circ$  rotation of  about the origin?
- a)       b)       c) 
- 4) Which one of the following is a  $90^\circ$  counterclockwise rotation of  about the origin?
- a)       b)       c) 
- 5) Which one of the following is a  $180^\circ$  rotation of  about the origin?
- a)       b)       c) 
- 6) Which one of the following is a  $90^\circ$  clockwise rotation of  about the origin?
- a)       b)       c) 
- 7) Which one of the following is a  $90^\circ$  counterclockwise rotation of  about the origin?
- a)       b)       c) 
- 8) Which one of the following is a  $90^\circ$  clockwise rotation of  about the origin?
- a)       b)       c) 

## Reflect the Shapes

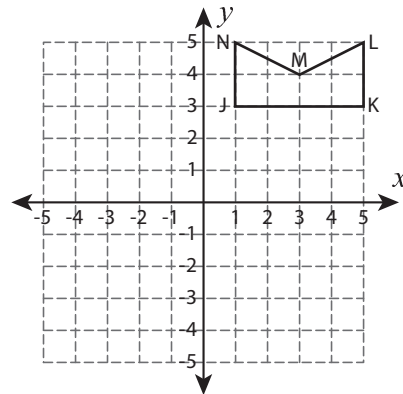
Sheet 3

Graph the image of each shape after the given reflection.

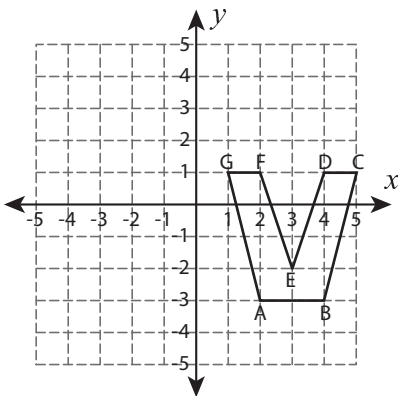
- 1) Reflection across the line
- $x = -4$



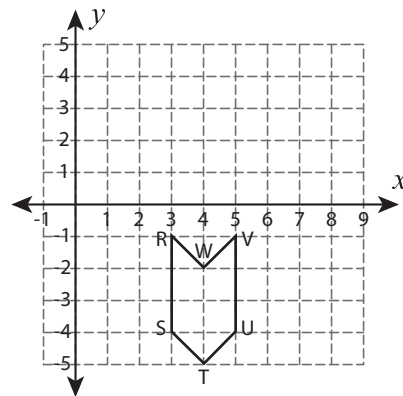
- 2) Reflection across the line
- $y = 1$



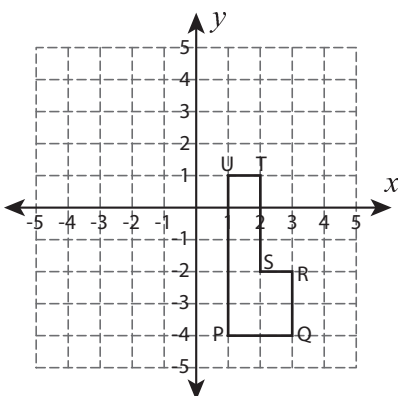
- 3) Reflection across the y-axis



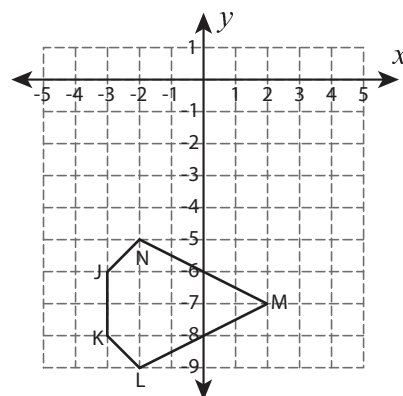
- 4) Reflection across the line
- $x = 6$



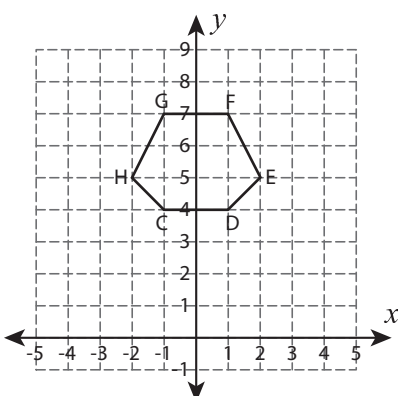
- 5) Reflection across the line
- $x = -1$



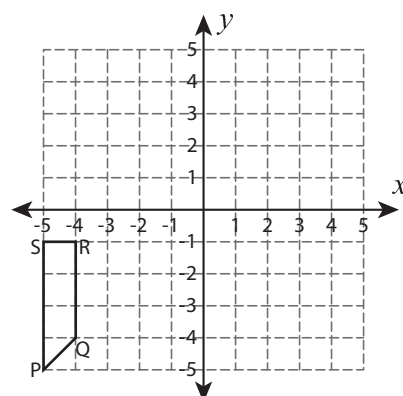
- 6) Reflection across the line
- $y = -5$



- 7) Reflection across the line
- $y = 3$



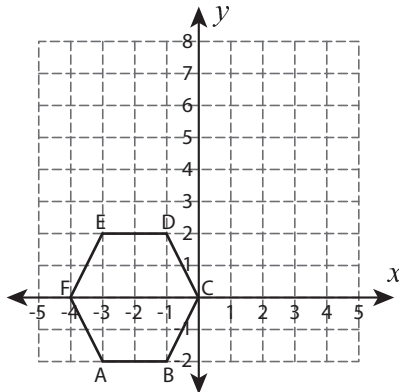
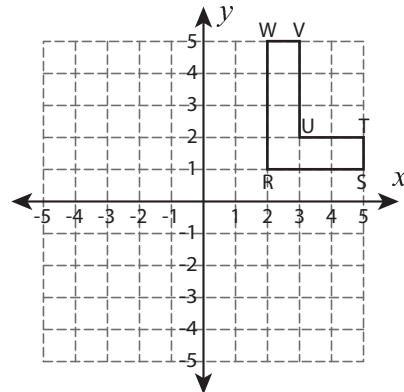
- 8) Reflection across the line
- $x = -2$



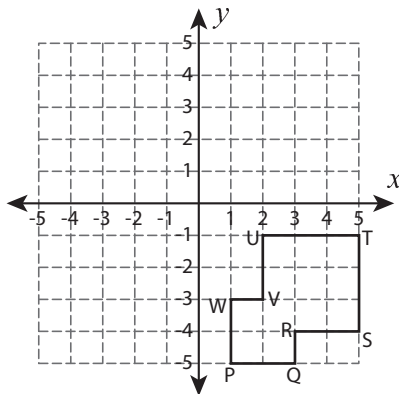
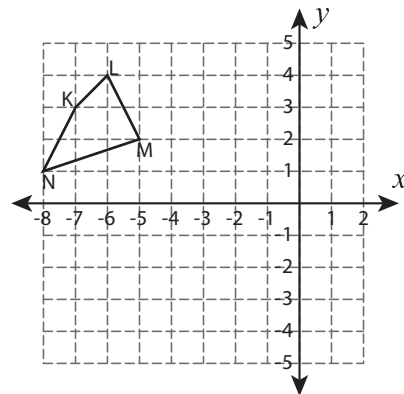
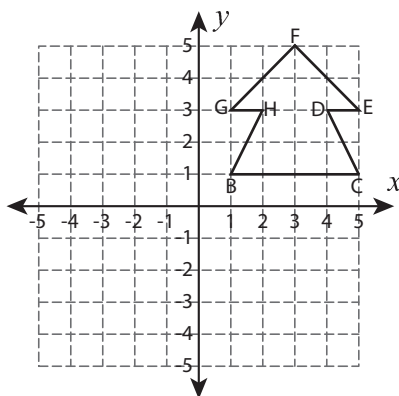
**Transform the Shapes**

Sheet 1

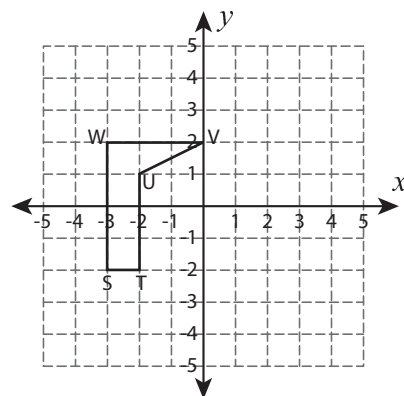
Graph the image of each shape after the given transformation.

1) Reflection across the line  $y = 3$ 2)  $90^\circ$  counterclockwise rotation about the origin

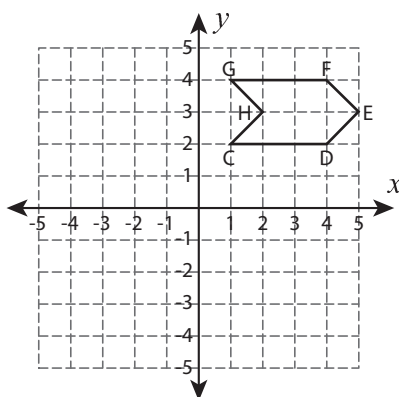
3) Translate 6 units up and 4 units left

4) Reflection across the line  $x = -4$ 5)  $180^\circ$  rotation about the origin

6) Translate 5 units right and 3 units down



7) Reflection across the x-axis

8)  $90^\circ$  clockwise rotation about the origin