

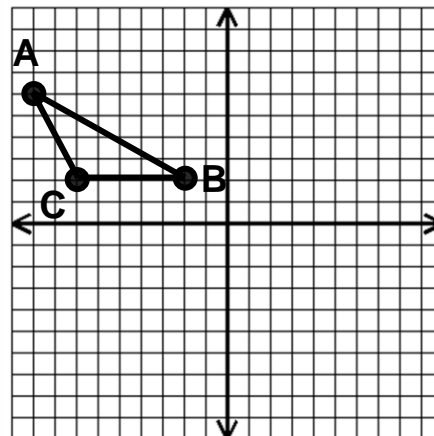
NAME \_\_\_\_\_ DATE \_\_\_\_\_ PER. \_\_\_\_\_

### TRANSLATIONS

Answer the following questions using the triangle given.

a) What is the image of point A under the translation that shifts  $(x,y)$  to  $(x + 3, y - 8)$ ?

b) A translation moves B onto  $B'$   $(6, 5)$ . What is the image of C under that same translation.

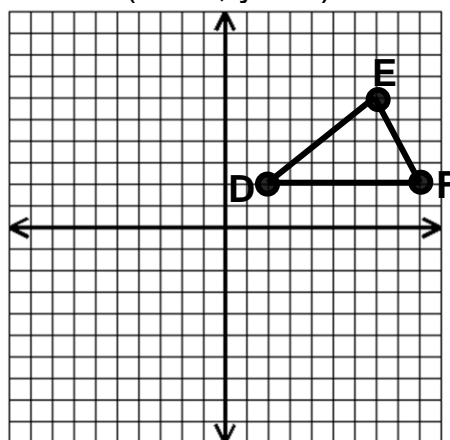


2.  $D'$  ( \_\_\_\_\_ , \_\_\_\_\_ )

$E'$  ( \_\_\_\_\_ , \_\_\_\_\_ )

$F'$  ( \_\_\_\_\_ , \_\_\_\_\_ )

$(x - 6, y + 2)$



**DRAW** the indicated translation of each polygon below, state the new coordinates of each vertex and find the object indicated.

3.  $G'$  ( \_\_\_\_\_ , \_\_\_\_\_ )

$H'$  ( \_\_\_\_\_ , \_\_\_\_\_ )

$I'$  ( \_\_\_\_\_ , \_\_\_\_\_ )

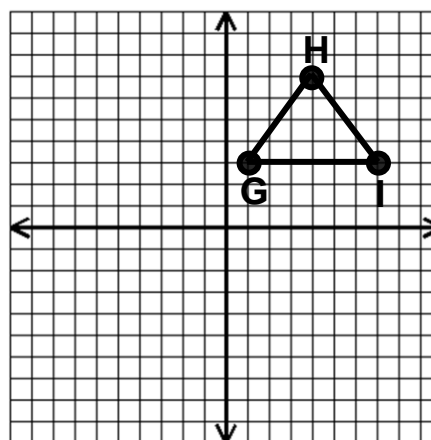
Find the equation of the line containing  $\overline{G'H'}$ .

\_\_\_\_\_

Name a slope parallel to it: \_\_\_\_\_

Name a slope perpendicular to it: \_\_\_\_\_

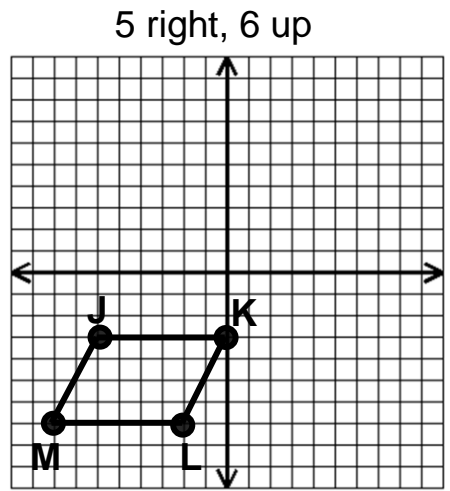
$(x - 2, y - 5)$



4. J' (\_\_\_\_\_, \_\_\_\_\_)  
 K' (\_\_\_\_\_, \_\_\_\_\_)  
 L' (\_\_\_\_\_, \_\_\_\_\_)  
 M' (\_\_\_\_\_, \_\_\_\_\_)

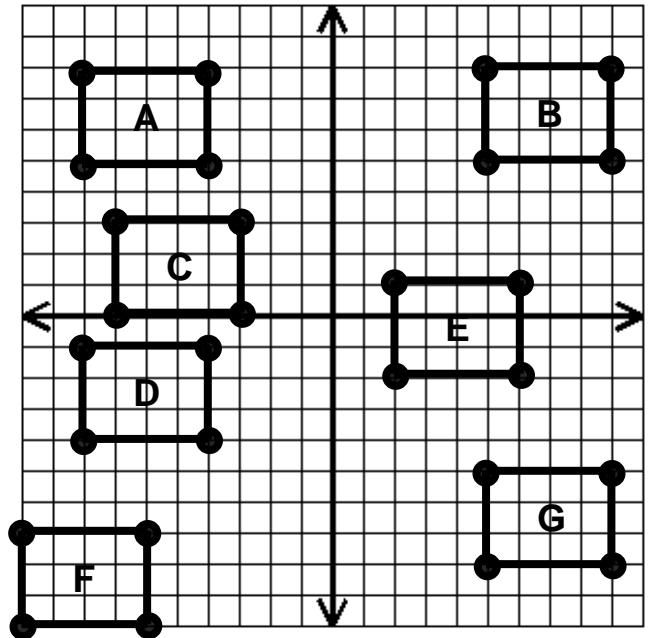
Write the equation of the line containing the perpendicular bisector of  $\overline{M'J'}$ :

\_\_\_\_\_



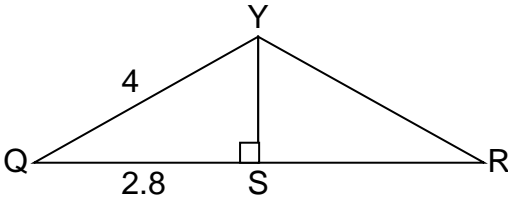
Describe each translation as an ordered pair translation.

5. _____	A to B
6. _____	E to D
7. _____	B to C
8. _____	E to F
9. _____	G to B
10. _____	C to D



11. \_\_\_\_\_

The ratio of the side lengths of a triangle is 4:5:8. If the perimeter is 38.25 centimeters, what is the length in centimeters of the shortest side?

12. _____	A sailboat has coordinates $100^\circ$ west and $5^\circ$ south. The boat sails $50^\circ$ due west. Then the boat sails $10^\circ$ due south. What is the boat's final position? What single translation vector moves it from its first position to its final position?
13. _____	Find the measure of one interior angle of a regular hexagon.
14. _____	<p>Find <math>YS</math> to the nearest thousandth.</p> 
15. _____	<p>If <math>J</math> is on the perpendicular bisector of <math>\overline{KL}</math>, what is the length of <math>\overline{KL}</math>?</p> 