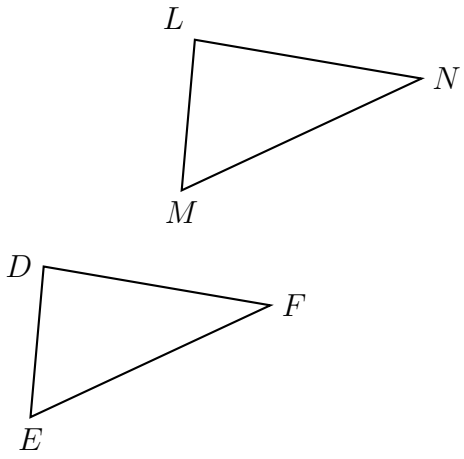
5.1 Reflections

1. Do Now: A translation maps triangle DEF onto triangle LMN.

   Write the letter or letters for each corresponding object.



(a) $E \rightarrow$

(b) $F \rightarrow$

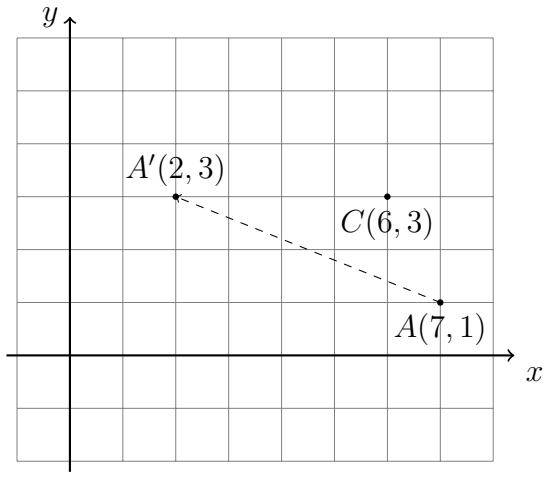
(c) $DF \rightarrow$

Auto scoring is turned on. Correct your errors.

2. Do Now: A translation maps A to A', as shown, $A(7,1) \to A'(2,3)$.

(a) Which direction is the slide?

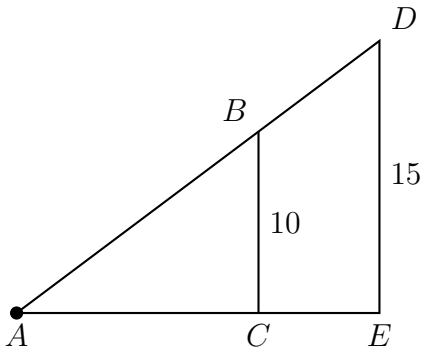
(A) Up, to the right
(B) Up, to the left
(C) Down, to the right
(D) Down, to the left
(E) None of the above



(b) If the same translation is applied to $C(6,3) \to C'(x,y)$, write the point C' as an ordered pair in the box. (with parenthesis)

3. Do Now: A dilation centered at A maps $\triangle ABC \to \triangle ADE$. Given that $BC = 10$, $DE = 15$.

   Write the value of the scale factor k in the box.

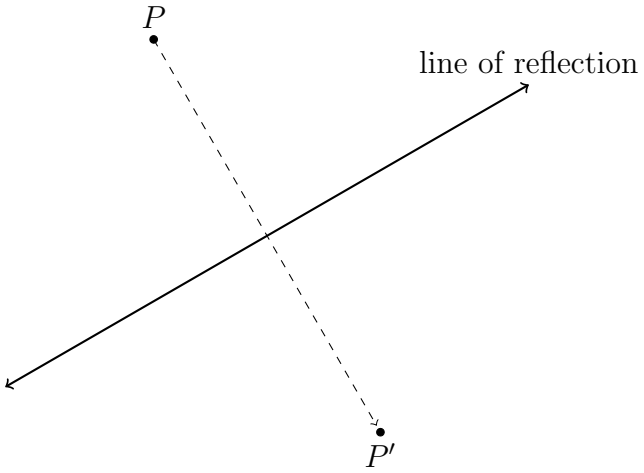


4. Take notes: *Reflection* is a transformation, also called "flipping." Reflection is like looking in the mirror.

   (a) Lengths and angles are maintained (it is a rigid motion, or isometry)

   (b) The *orientation* is reversed. (letters are all backwards)

   (c) The *line of reflection* is a perpendicular bisector of the segment connecting a reflected point to its image.

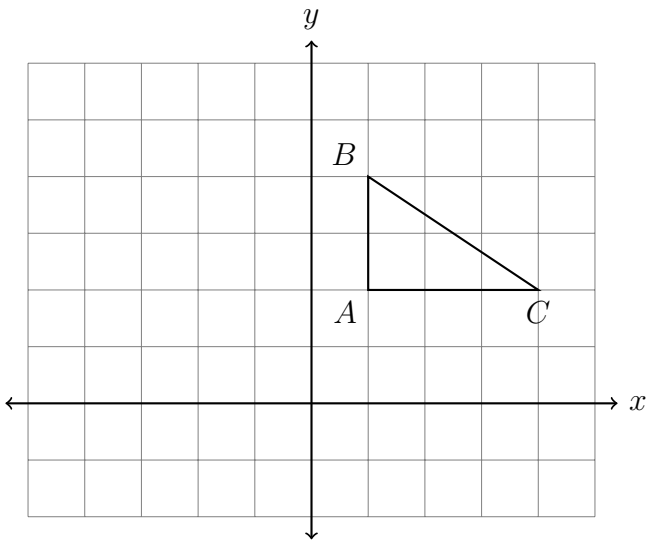


5. Reflect the triangle across the y-axis, $\triangle ABC \to \triangle A'B'C'$. Complete the table of the coordinates and plot and label the image on the grid.

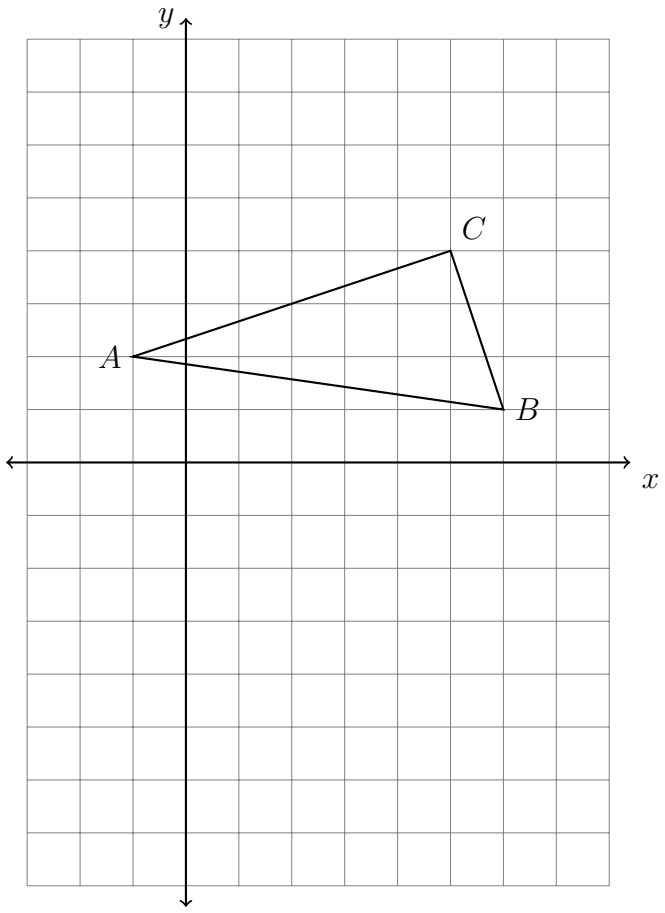
$A(1, 2) \to$

$B(1, 4) \to$

$C(4, 2) \to$

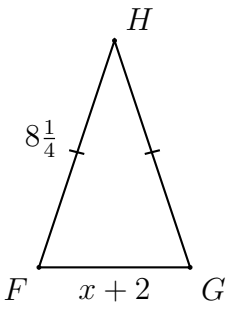


6. $\triangle ABC$ is shown with vertices $A(-1, 2)$, $B(6, 1)$, and $C(5, 4)$. Reflect the triangle across the x-axis. Write down its coordinates in a table and plot and label it on the graph.



7. Exam review: The perimeter of the isosceles $\triangle FGH$ is $19\frac{1}{2}$ with $\overline{FH} \cong \overline{GH}$. If $FG = x + 2$ and $FH = 8\frac{1}{4}$, find x.

   Show your work with an equation.



Write the value of x in the box.