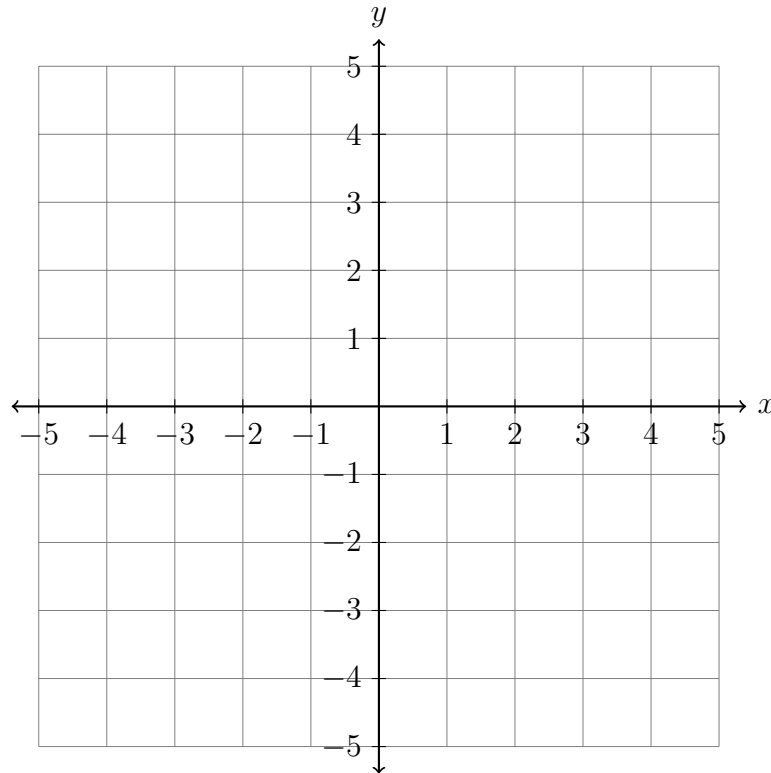


Name:

8.5 Homework: Mixed congruence transformations

CCSS.HSG.CO.A.5

- Plot the parallelogram $BECA$ with $B(-2, -1)$, $E(3, -1)$, $C(2, -4)$, and $A(-3, -4)$. Translate the quadrilateral up 5 and right 2, labeling it $B'E'C'A'$. (use a straight edge for full credit)

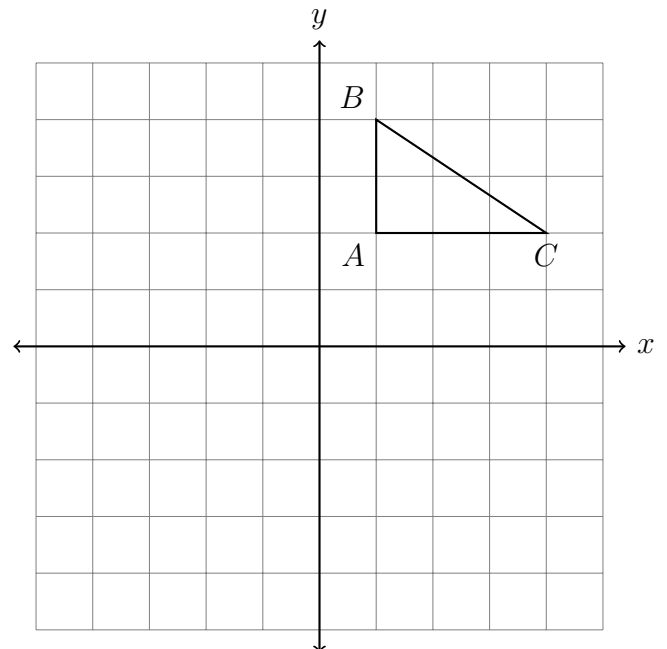


- Reflect the triangle over the x -axis, $\triangle ABC \rightarrow \triangle A'B'C'$. Complete the table of the coordinates and plot and label the image on the grid.

$A(1, 2) \rightarrow$

$B(1, 4) \rightarrow$

$C(4, 2) \rightarrow$

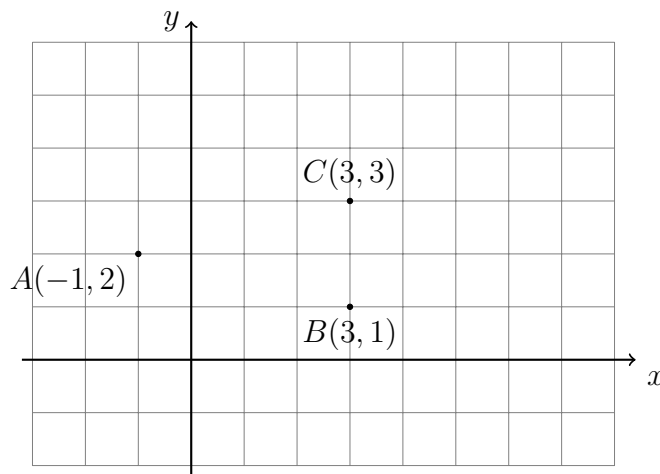


3. A translation is performed mapping $(x, y) \rightarrow (x + 4, y - 1)$.

(a) What is the horizontal shift, how many squares right or left?

(b) What is the vertical shift, how many squares up or down?

(c) Identify the image of point A .
 $A(-1, 2) \rightarrow$

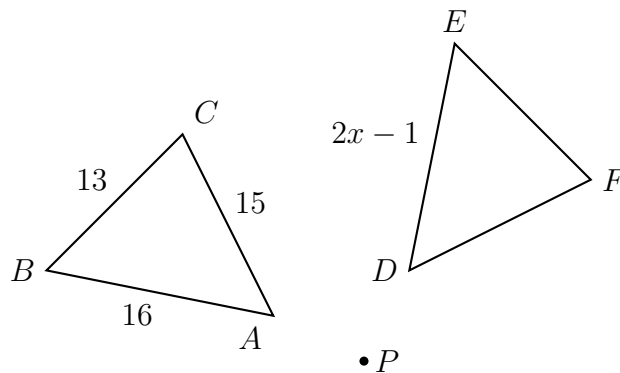


4. In the diagram below, $\triangle ABC$ with sides of 13, 15, and 16, is mapped onto $\triangle DEF$ after a clockwise rotation of 90° about point P .

(a) What is A mapped to? $A \rightarrow$

(b) What corresponds to F ?

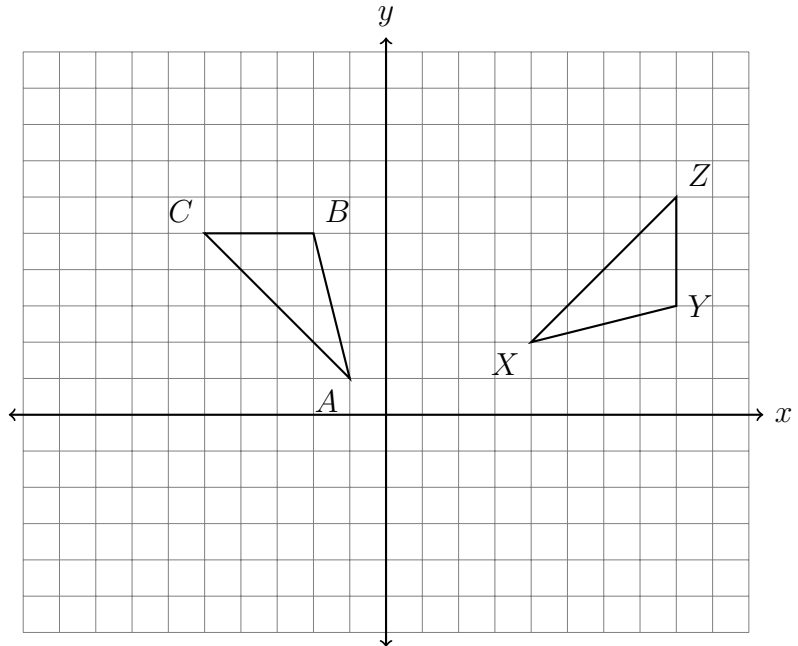
(c) Given $DE = 2x - 1$. Find x .



5. A translation maps $D(2, 4) \rightarrow D'(-3, 4)$. What is the image of $E(5, -5)$ under the same translation?

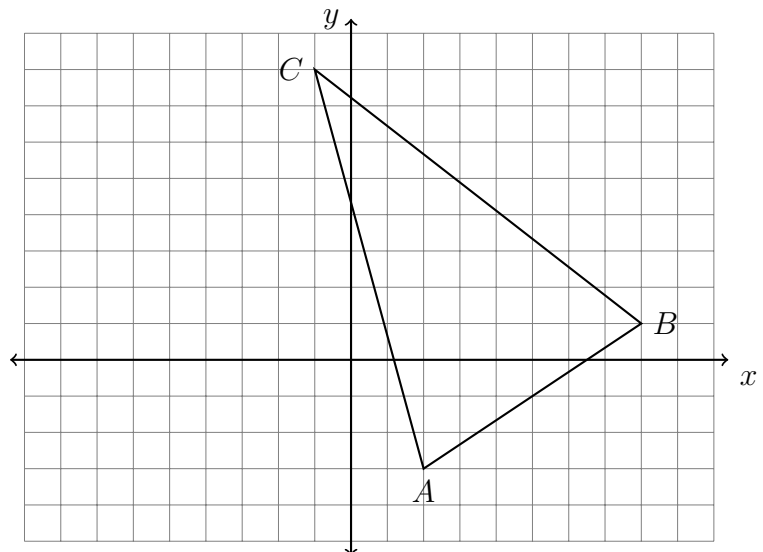
Name:

6. The triangle ABC , shown below, undergoes two rigid motions carrying it onto triangle XYZ . State the two isometric transformations. (be specific)

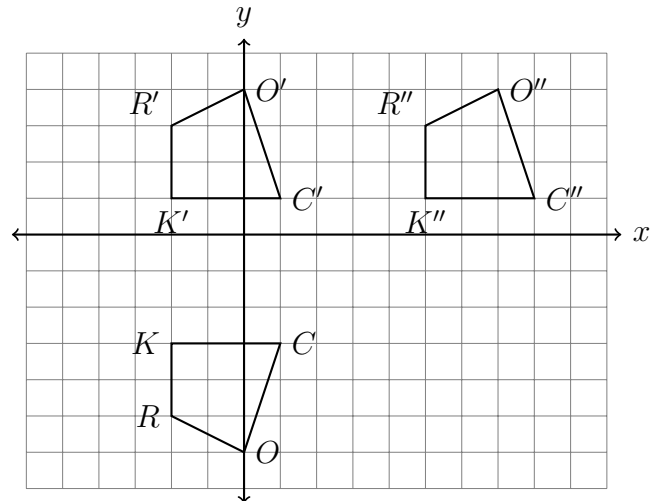


7. Triangle $\triangle ABC$ is graphed on the set of axes below. The vertices of $\triangle ABC$ have the coordinates $A(2, -3)$, $B(8, 1)$, and $C(-1, 8)$.

Reflect the triangle across the y -axis. Write down its coordinates in a table and plot and label it on the graph.



8. The quadrilateral $ROCK$ undergoes rigid motions, shown below. Describe the sequence of transformations applied.



9. The quadrilateral $MATH$ is mapped to $M'A'T'H'$ by a rigid motion. What transformation has been applied?

(a) Dilation

(b) Reflection

(c) Rotation

(d) Translation

