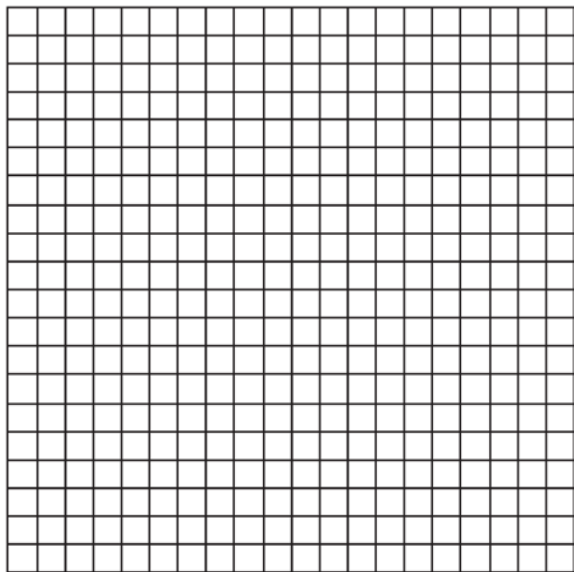
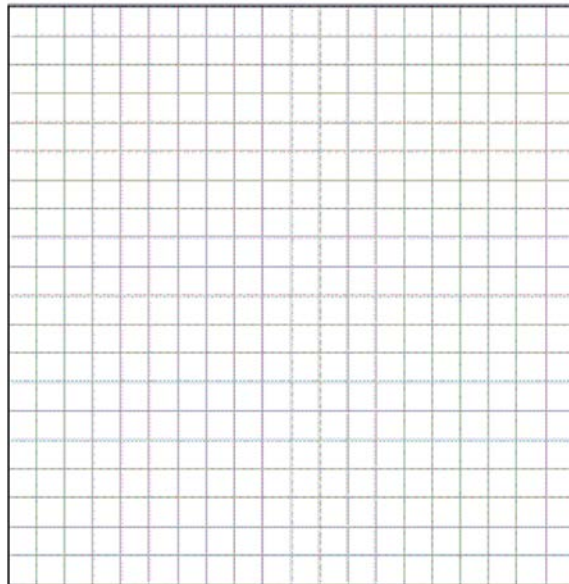


**G.CO.A.5: Reflections 2**

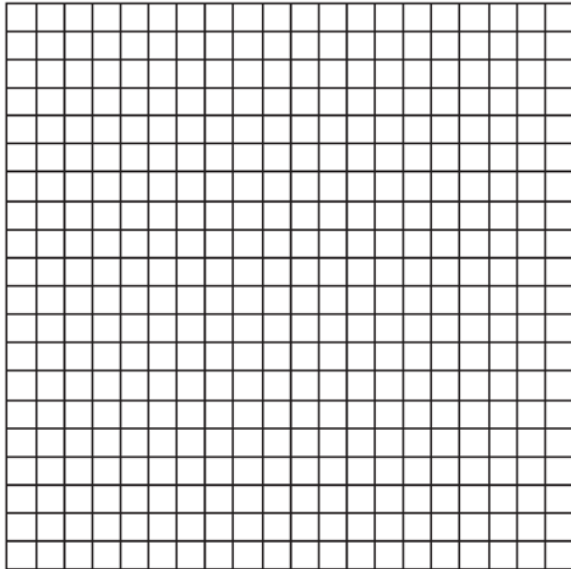
- 1 The coordinates of the endpoints of  $\overline{AB}$  are  $A(0,2)$  and  $B(4,6)$ . Graph and state the coordinates of  $A'$  and  $B'$ , the images of  $A$  and  $B$  after  $\overline{AB}$  is reflected in the  $x$ -axis.



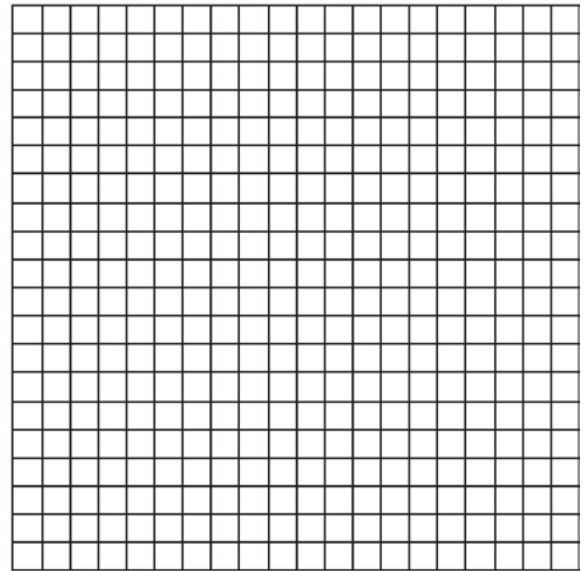
- 2 Triangle  $ABC$  has vertices  $A(-2,2)$ ,  $B(-1,-3)$ , and  $C(4,0)$ . Find the coordinates of the vertices of  $\triangle A'B'C'$ , the image of  $\triangle ABC$  after the transformation  $r_{x\text{-axis}}$ . [The use of the grid is optional.]



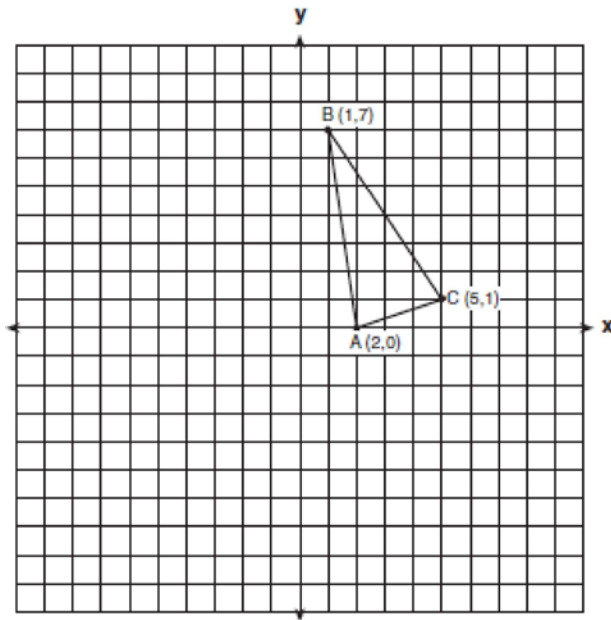
- 3 Triangle  $SUN$  has coordinates  $S(0,6)$ ,  $U(3,5)$ , and  $N(3,0)$ . On the accompanying grid, draw and label  $\triangle SUN$ . Then, graph and state the coordinates of  $\triangle S'U'N'$ , the image of  $\triangle SUN$  after a reflection in the  $y$ -axis.



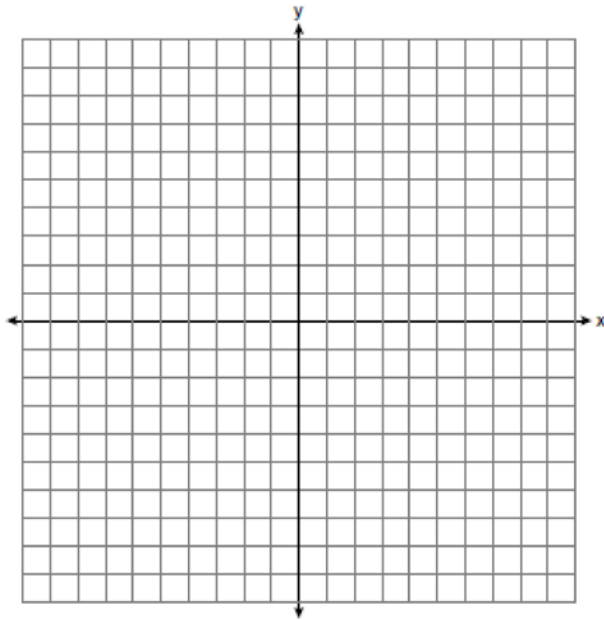
- 5 On the accompanying grid, draw and label quadrilateral  $ABCD$  with points  $A(1,2)$ ,  $B(6,1)$ ,  $C(7,6)$ , and  $D(3,7)$ . On the same set of axes, plot and label quadrilateral  $A'B'C'D'$ , the reflection of quadrilateral  $ABCD$  in the  $y$ -axis. Determine the area, in square units, of quadrilateral  $A'B'C'D'$ .



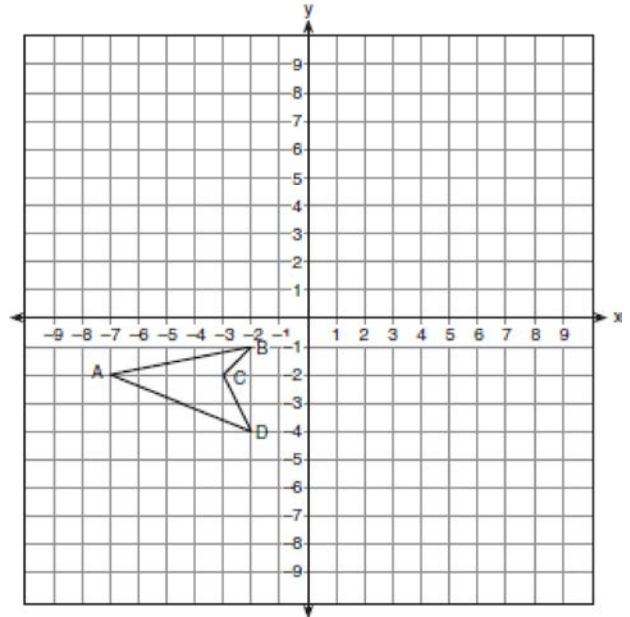
- 4 Triangle  $ABC$  has coordinates  $A(2,0)$ ,  $B(1,7)$ , and  $C(5,1)$ . On the accompanying set of axes, graph, label, and state the coordinates of  $\triangle A'B'C'$ , the reflection of  $\triangle ABC$  in the  $y$ -axis.



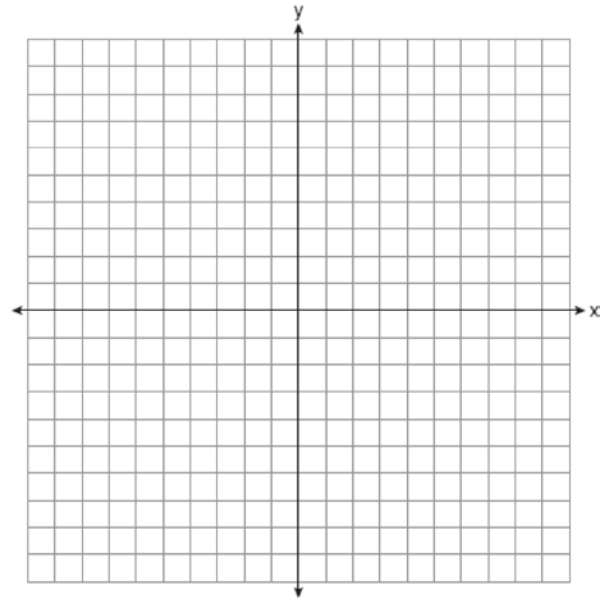
- 6 Carson is a decorator. He often sketches his room designs on the coordinate plane. He has graphed a square table on his grid so that its corners are at the coordinates  $A(2,6)$ ,  $B(7,8)$ ,  $C(9,3)$ , and  $D(4,1)$ . To graph a second identical table, he reflects  $ABCD$  over the  $y$ -axis. On the accompanying set of coordinate axes, sketch and label  $ABCD$  and its image  $A'B'C'D'$ , which show the locations of the two tables. Then find the number of square units in the area of  $ABCD$ .



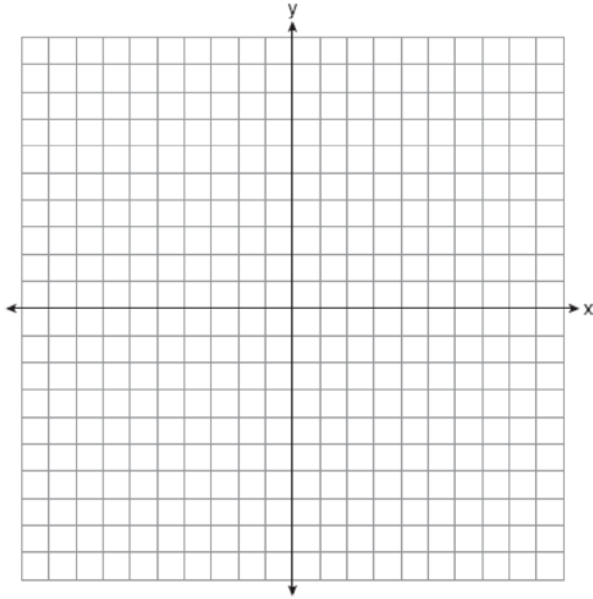
- 7 On the accompanying set of axes, draw the reflection of  $ABCD$  in the  $y$ -axis. Label and state the coordinates of the reflected figure.



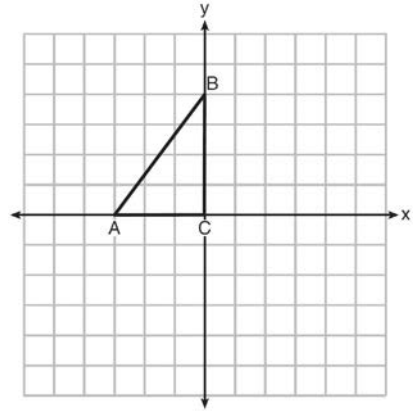
- 8 Triangle  $ABC$  has vertices  $A(-1, 1)$ ,  $B(1, 3)$ , and  $C(4, 1)$ . The image of  $\triangle ABC$  after the transformation  $r_{y=x}$  is  $\triangle A'B'C'$ . State and label the coordinates of  $\triangle A'B'C'$ . [The use of the set of axes below is optional.]



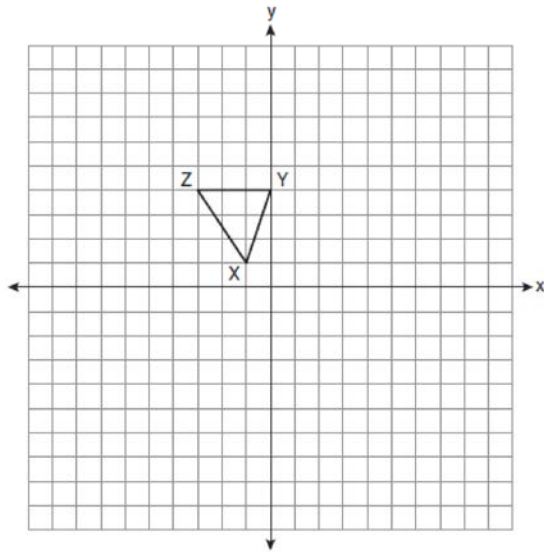
- 9 The image of  $\overline{RS}$  after a reflection through the origin is  $\overline{R'S'}$ . If the coordinates of the endpoints of  $\overline{RS}$  are  $R(2, -3)$  and  $S(5, 1)$ , state and label the coordinates of  $R'$  and  $S'$ . [The use of the set of axes below is optional.]



- 11 Triangle  $ABC$  is graphed on the set of axes below. Graph and label  $\triangle A'B'C'$ , the image of  $\triangle ABC$  after a reflection over the line  $x = 1$ .

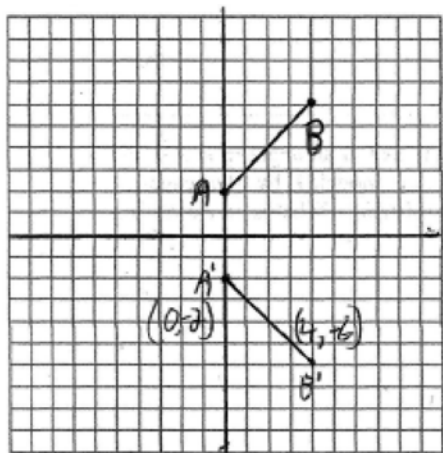


- 10 Triangle  $XYZ$ , shown in the diagram below, is reflected over the line  $x = 2$ . State the coordinates of  $\triangle X'Y'Z'$ , the image of  $\triangle XYZ$ .



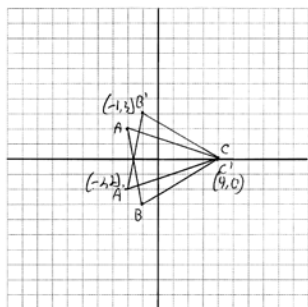
### G.CO.A.5: Reflections 2 Answer Section

1 ANS:



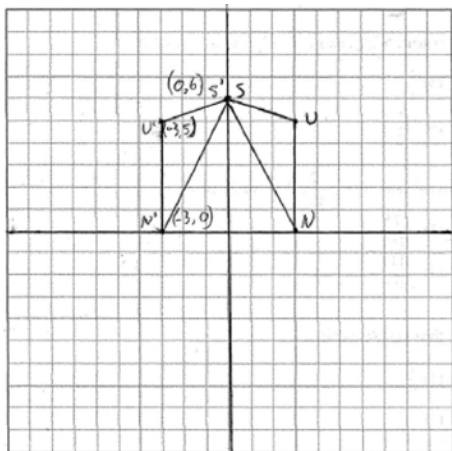
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2 ANS:



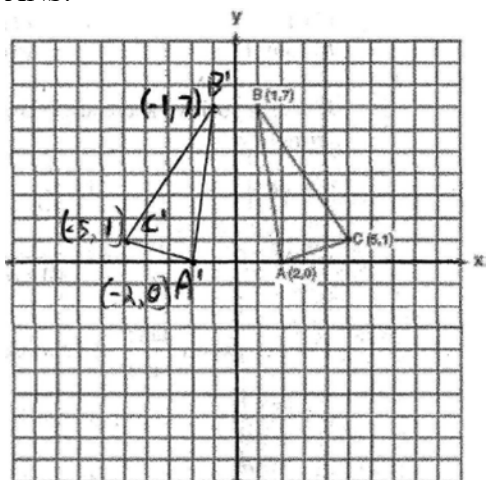
REF: 011130ge

3 ANS:



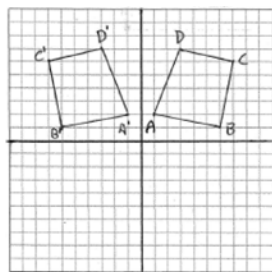
REF: 060135a

4 ANS:



REF: 080637a

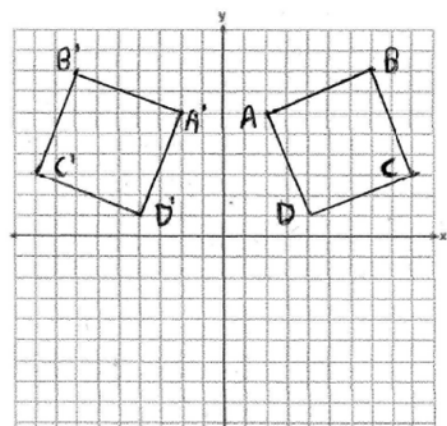
5 ANS:



24.

REF: 010333a

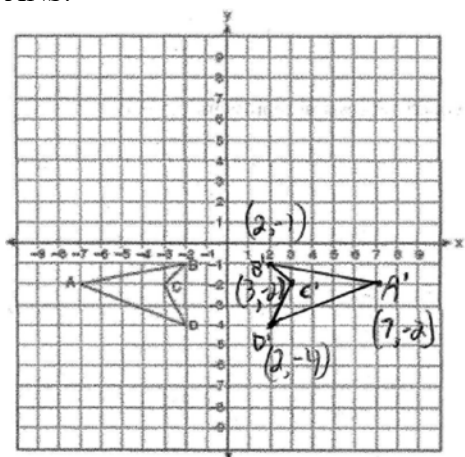
6 ANS:



29.  $5^2 + 2^2 = s^2$   
 $s = \sqrt{29}$

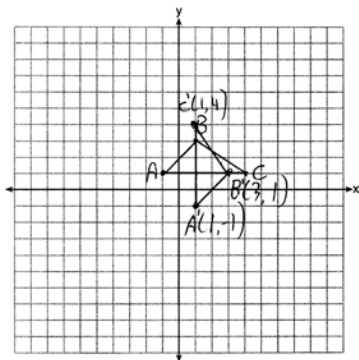
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7 ANS:



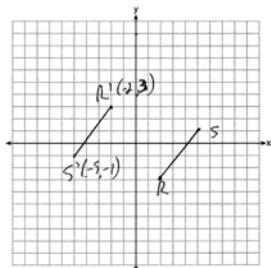
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8 ANS:



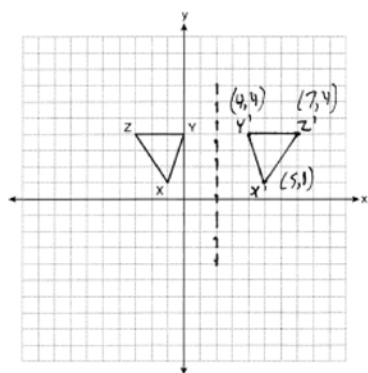
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9 ANS:



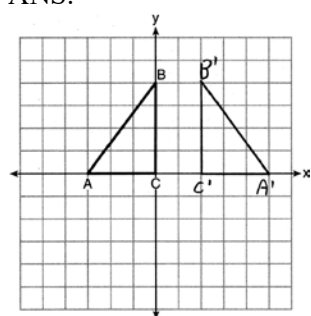
REF: 081529ge

10 ANS:



REF: 061032ge

11 ANS:



REF: 011625geo