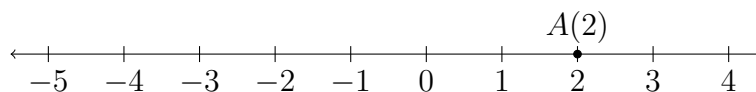


Name:

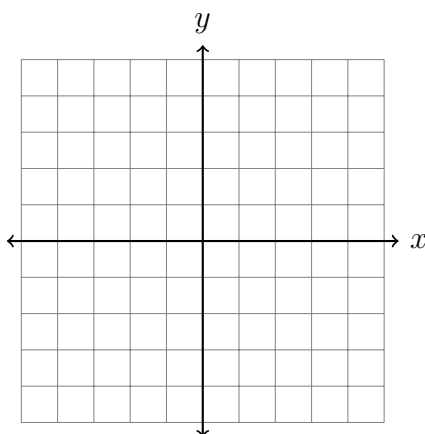
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**5.1 Classwork: Translation****CCSS.HSG.CO.A.5**

- Slide the point  $A(2)$  two units to the right. Mark and label it  $A'$ . What slide would shift  $A$  onto the point  $B(-3)$ ?

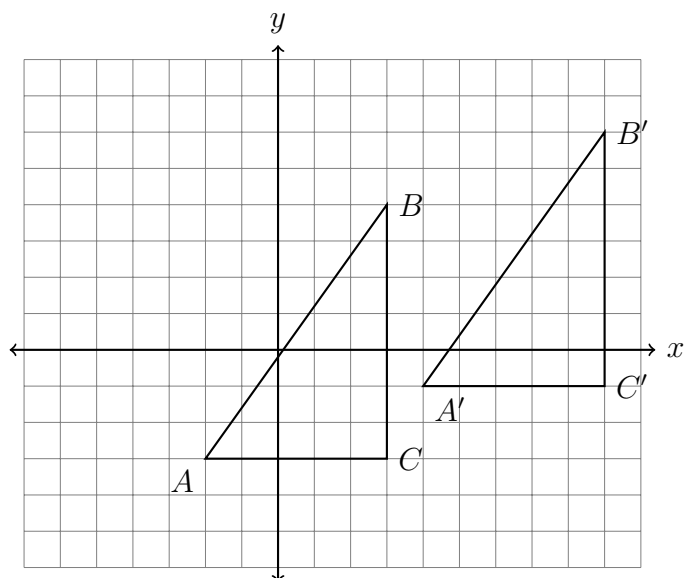


- On the axes below, graph the point  $N(-3, 2)$  and its image,  $N'$ , after a translation of right 3, down 4. Mark  $N'$  and write it down as a coordinate pair.

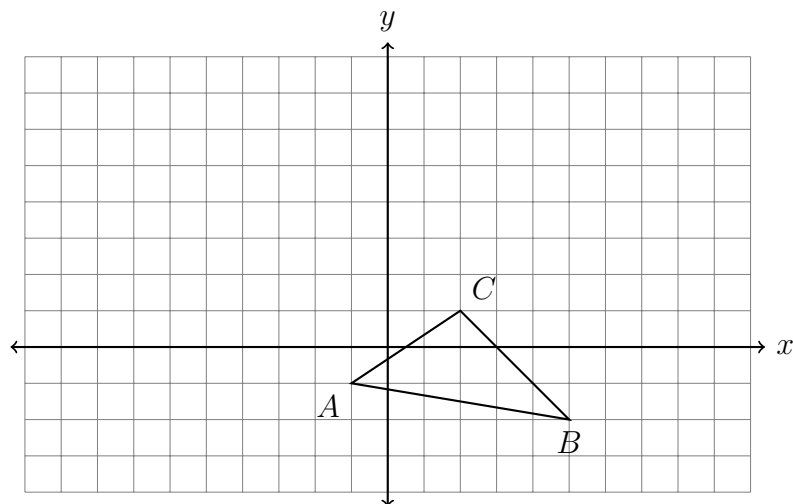


- Apply the translation  $(x, y) \rightarrow (x - 3, y + 5)$  to the point  $P(-2, -5)$ .

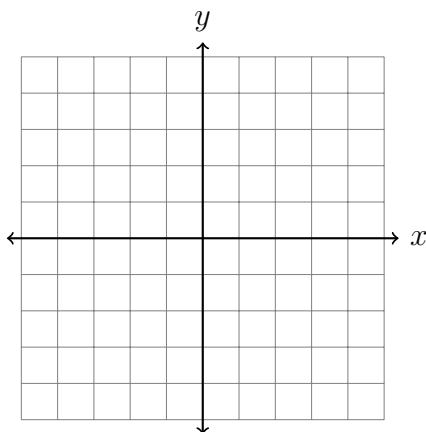
- Identify the transformation that maps  $\triangle ABC$  onto its image  $\triangle A'B'C'$ .



5. Slide  $\triangle ABC$  to the left four and up five. Label the image  $\triangle A'B'C'$ .



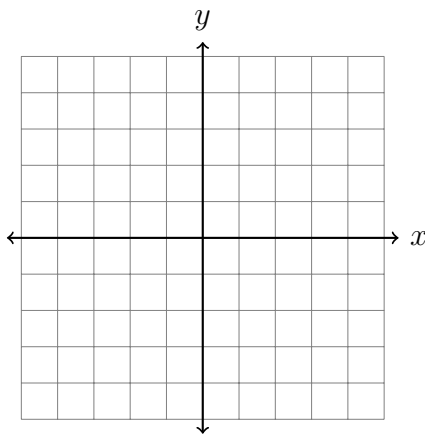
6. State the translation that would map  $Q(4, 3)$  onto  $Q'(-1, -3)$ .
7. Triangle  $A'B'C'$  is the image of triangle  $ABC$  after a translation of 2 units to the right and 3 units up. Is triangle  $ABC$  congruent to  $A'B'C'$ ? Explain why.
8. State the translation that would map  $C(-4, 0)$  onto  $C'(3, -3)$ . (the use of the grid below is optional)



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9. On the axes below, plot the point  $A(-4, -1)$  and its image,  $A'$ , after the translation  $(x, y) \rightarrow (x + 6, y - 3)$ . Label the image as a coordinate pair.



10. The image of triangle  $ABC$  after a translation is  $\triangle A'B'C'$ . Is the area of the triangle greater, smaller, or the same after the translation? Justify your answer.