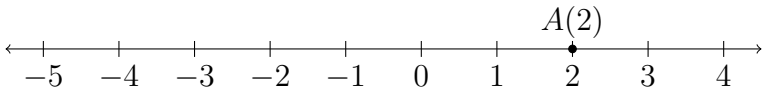
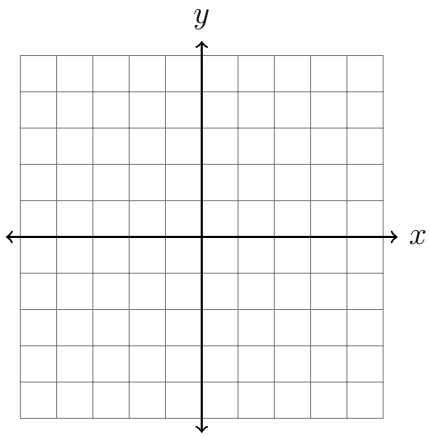
8.1 Classwork: Translation **CCSS.HSG.CO.A.5**

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

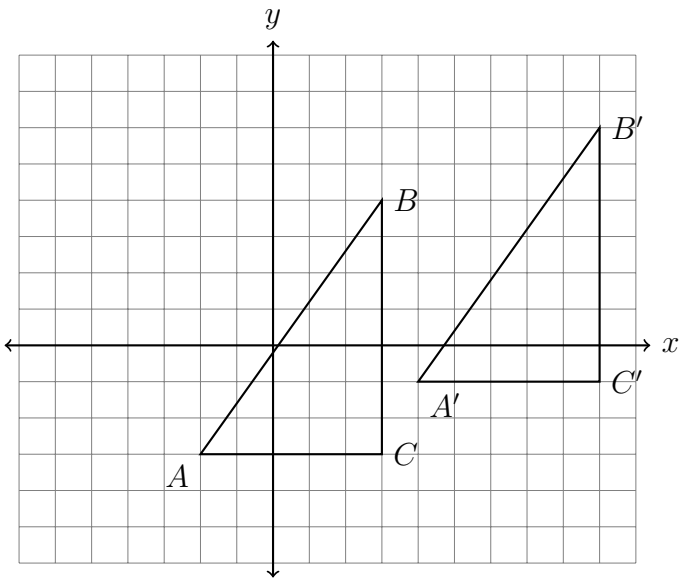


2. On the axes below, graph the point $N(-3, 2)$ and its image, N', after a translation of right 3, down 4. Mark N' and write it down as a coordinate pair.

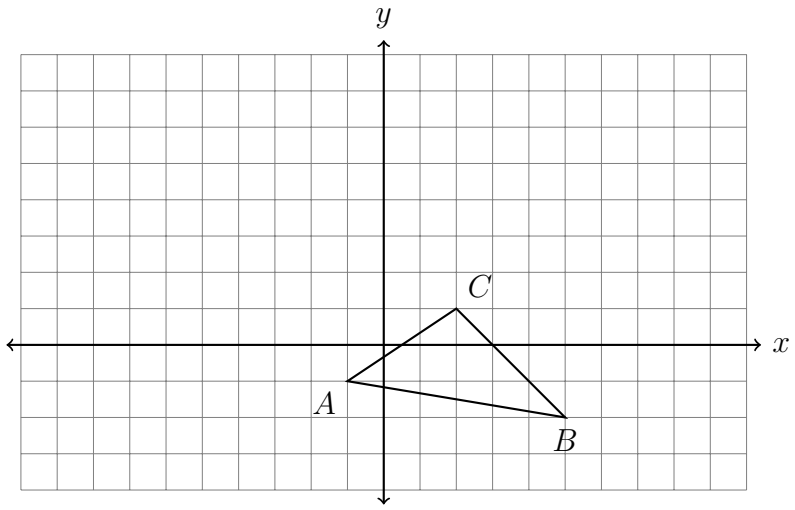


3. Apply the translation $(x, y) \to (x - 3, y + 5)$ to the point $P(-2, -5)$.

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



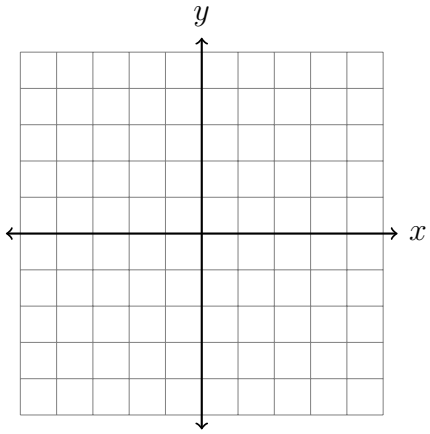
5. Slide $\triangle ABC$ to the left four and up five. Label the image $\triangle A'B'C'$.



6. State the translation that would map $Q(4, 3)$ onto $Q'(-1, -3)$.

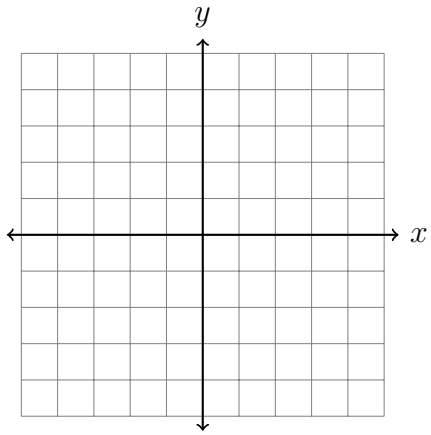
7. Triangle $A'B'C'$ is the image of triangle ABC after a translation of 2 units to the right and 3 units up. Is triangle ABC congruent to $A'B'C'$? Explain why.

8. State the translation that would map $C(-4, 0)$ onto $C'(3, -3)$. (the use of the grid below is optional)



9. On the axes below, plot the point $A(-4, -1)$ and its image, A', after the translation

$(x, y) \to (x + 6, y - 3)$. 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.