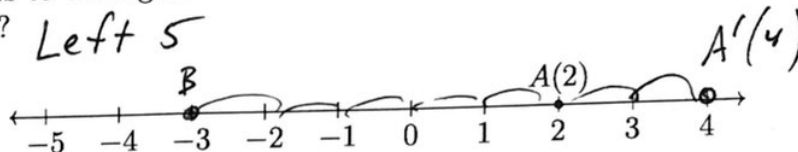


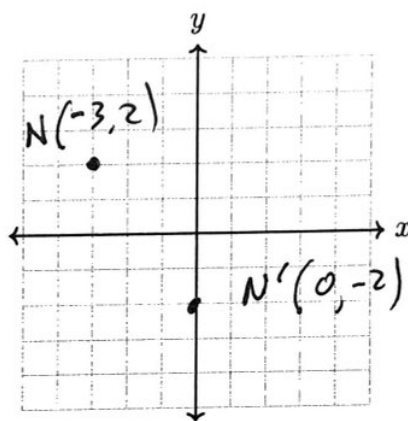
7.1 Classwork: Translation

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 $B(-3)$? Left 5



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.



$$N(-3, 2) \rightarrow N'(0, -2)$$

3. Translate the point $A(3, 4)$ by $T_{1, -3}$.

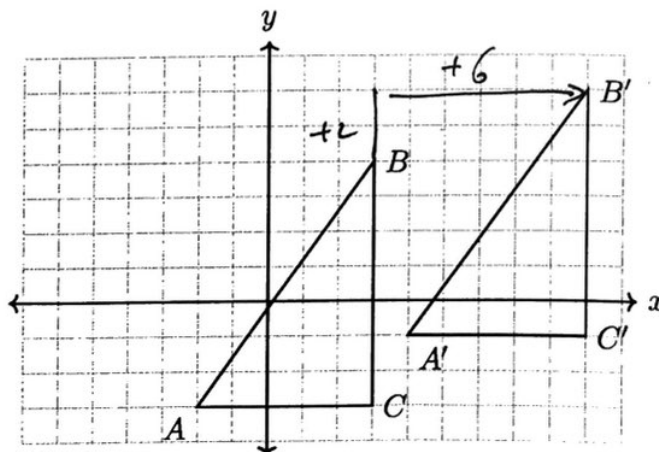
$$A(3, 4) \rightarrow A'(4, 1)$$

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

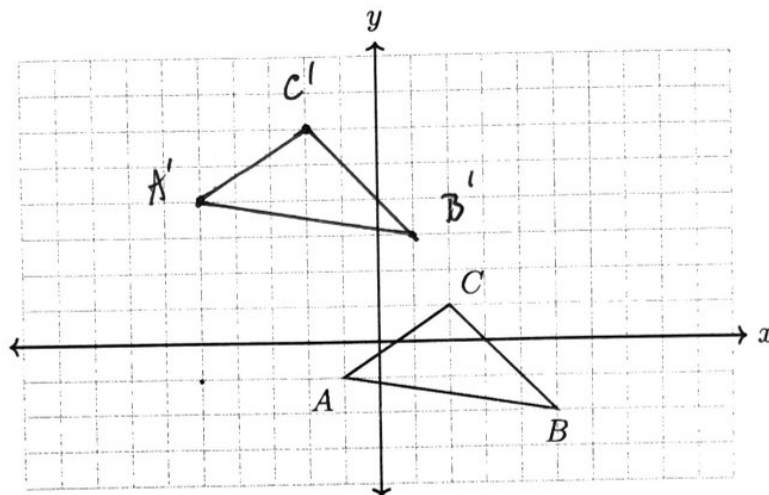
$$P(-2, -5) \rightarrow P'(-5, 0)$$

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

$$T_{+6, +2}$$



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



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

$$T_{-5, -6} \quad (x, y) \rightarrow (x-5, y-6)$$

8. 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.

Yes. Translation is a rigid motion that maintains length and angles.
 $\triangle ABC \cong \triangle A'B'C'$

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

$T_{+7, -3}$
 right 7
 down 3

