Lesson 3: Translating Lines

Exit Ticket

1. Translate point \( Z \) along vector \( \overrightarrow{AB} \). What do you know about the line containing vector \( \overrightarrow{AB} \) and the line formed when you connect \( Z \) to its image \( Z' \)?

2. Using the above diagram, what do you know about the lengths of segments \( ZZ' \) and \( AB \)?

3. Let points \( A \) and \( B \) be on line \( L \) and the vector \( \overrightarrow{AC} \) be given, as shown below. Translate line \( L \) along vector \( \overrightarrow{AC} \). What do you know about line \( L \) and its image, \( L' \)? How many other lines can you draw through point \( C \) that have the same relationship as \( L \) and \( L' \)? How do you know?