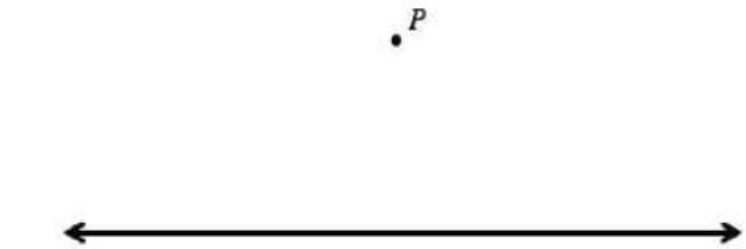
Lesson 3: Translating Lines

Classwork

Exercises

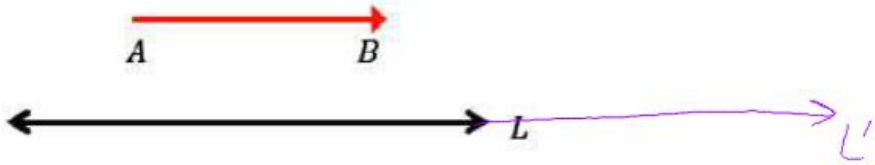
1. Draw a line passing through point P that is parallel to line L. Draw a second line passing through point P that is parallel to line L, and that is distinct (i.e., different) from the first one. What do you notice?



2. Translate line L along the vector $\overrightarrow{AB}$. What do you notice about L and its image L'?

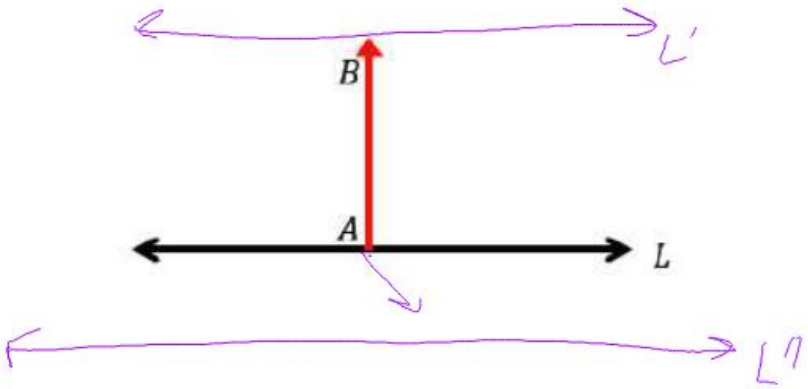
The lines are the same.

3. Line L is parallel to vector $\overrightarrow{AB}$. Translate line L along vector $\overrightarrow{AB}$. What do you notice about L and its image, L'?

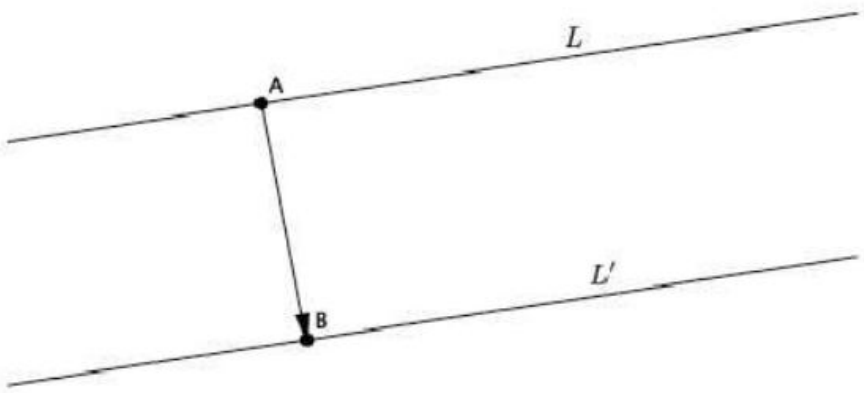


4. Translate line L along the vector $\overrightarrow{AB}$. What do you notice about L and its image, L'?

L + L' are parallel lines



5. Line L has been translated along vector $\overrightarrow{AB}$ resulting in L'. What do you know about lines L and L'?



6. Translate L_1 and L_2 along vector $\overrightarrow{DE}$. Label the images of the lines. If lines L_1 and L_2 are parallel, what do you know about their translated images?

parallel Lines remain parallel after being translated.