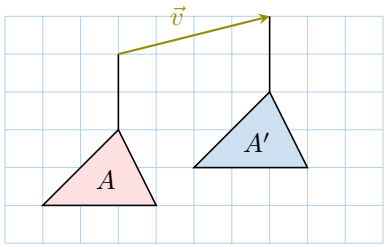
TRANSLATION

A WHAT IS A TRANSLATION?

Discover: When an object is slid without turning, all its points are moved in the same way. This movement can be represented by a vector, which gives the direction and the length of the translation.

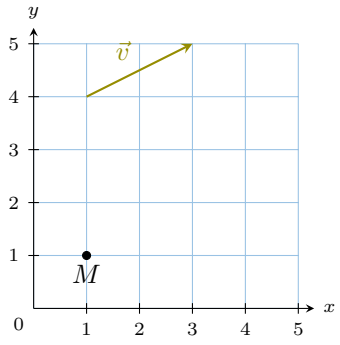


The cable car A' is the image of cable car A under the translation by vector $\vec{v}$.

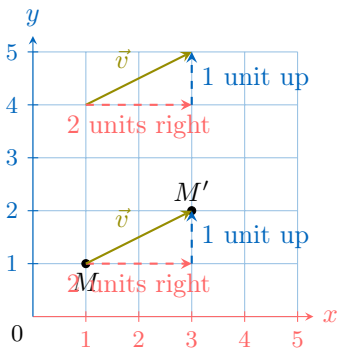
Definition Translation of a Point

The **translation** of point M by vector $\vec{v}$ is the point M' such that $\overrightarrow{MM'} = \vec{v}$: point M is slid to point M' following the direction and the length of the vector $\vec{v}$.

Ex: Find the coordinates of the image of point M under a translation by vector $\vec{v}$.



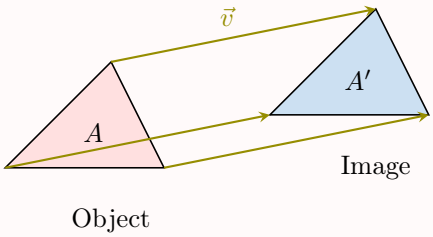
Answer:



$M'(3, 2)$

Definition **Translation**

The **translation** of an object by vector $\vec{v}$ is the figure obtained by translating all its points by the same vector $\vec{v}$.



Object