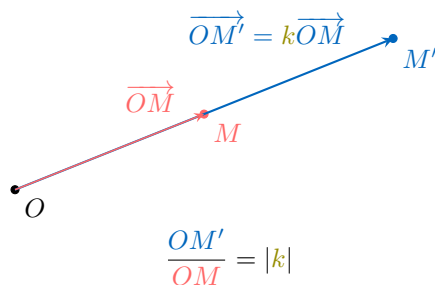


HOMOTHETY

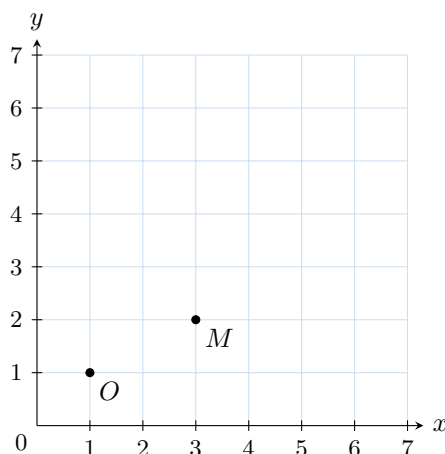
A DEFINITIONS

Definition Homothety of a Point

The **homothety** of point M with center O and scale factor k is the point M' such that M' is the translation of point O by the vector $k\overrightarrow{OM}$.

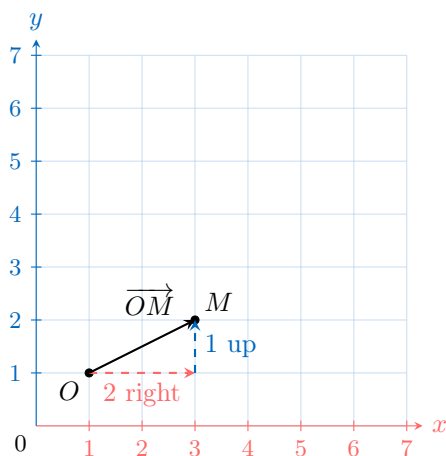


Ex: Find the coordinates of the image of point M under a homothety with center O and scale factor $k = 2$.

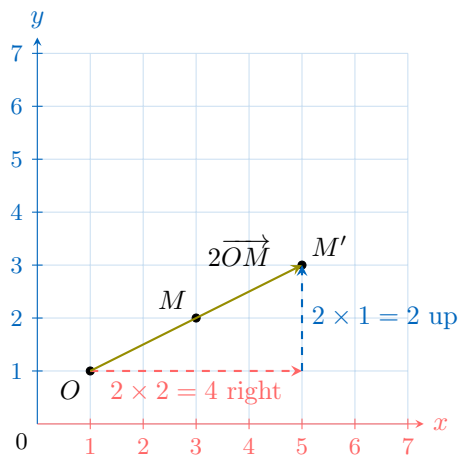


Answer:

- \overrightarrow{OM} :



- $\overrightarrow{OM'} = 2\overrightarrow{OM}$:



- $M'(5,3)$

Definition Homothety

The **homothety** of a figure with center O and scale factor k is the homothety of all its points.

Ex: The figure A' is the image of figure A under a homothety with center O and scale factor 2.

