

Lesson Summary

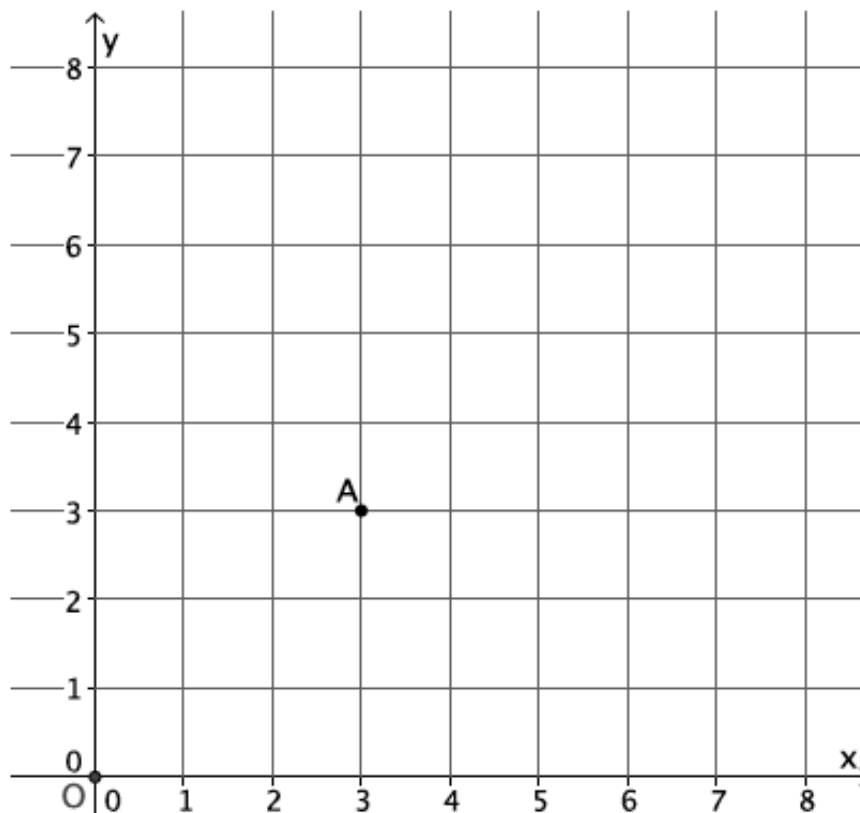
Converse of the fundamental theorem of similarity:

If lines PQ and $P'Q'$ are parallel and $|P'Q'| = r|PQ|$, then from a center O , $P' = \text{Dilation}(P)$, $Q' = \text{Dilation}(Q)$, $|OP'| = r|OP|$, and $|OQ'| = r|OQ|$.

To find the coordinates of a dilated point, we must use what we know about FTS, dilation, and scale factor.

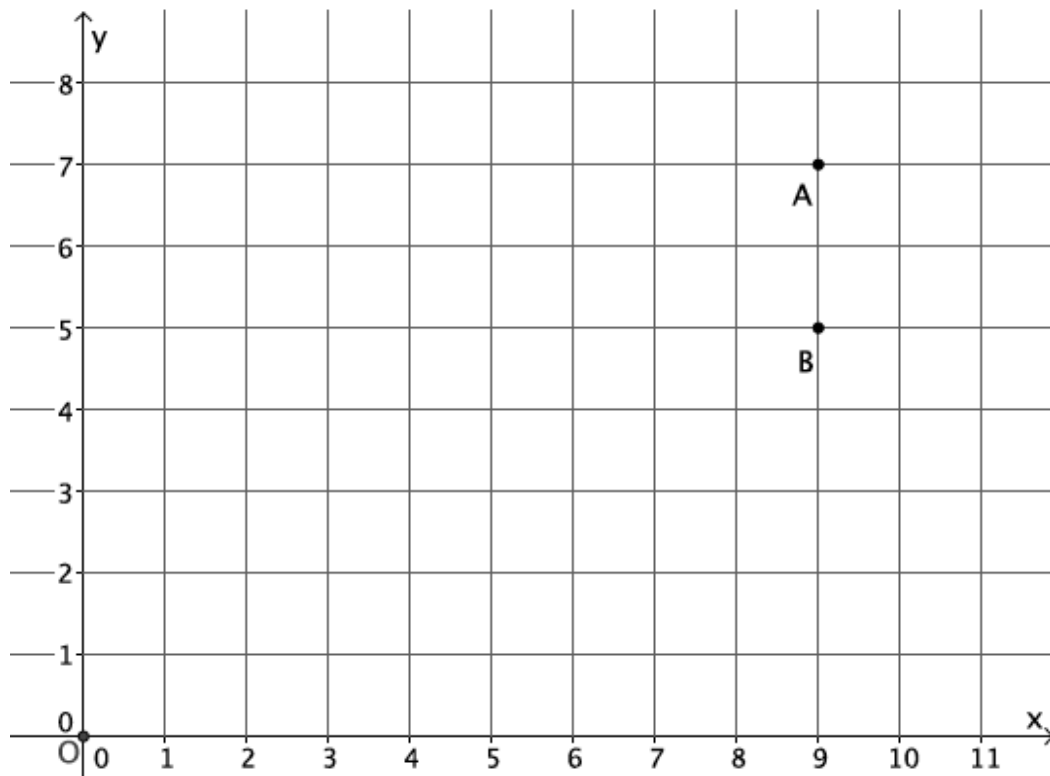
Problem Set

1. Dilate point A , located at $(3, 4)$ from center O , by a scale factor $r = \frac{5}{3}$.



What is the precise location of point A' ?

2. Dilate point A , located at $(9, 7)$ from center O , by a scale factor $r = \frac{4}{9}$. Then, dilate point B , located at $(9, 5)$ from center O , by a scale factor of $r = \frac{4}{9}$. What are the coordinates of points A' and B' ? Explain.



3. Explain how you used the fundamental theorem of similarity in Problems 1 and 2.