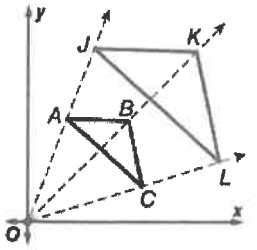
Dilation: a transformation that enlarges or reduces the original figure proportionally

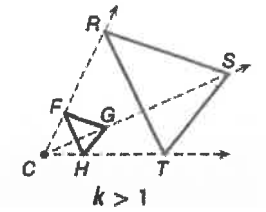
Center of Dilation: the fixed point in which dilations are performed w/ respect to

Scale Factor of Dilation: The ratio of a length on the image to a corresponding length on the preimage



△JKL is a dilation of △ABC.
Center of dilation: (0, 0)
★ Scale factor: $\frac{JK}{AB}$ ★ $\frac{\text{dilation}}{\text{original}}$

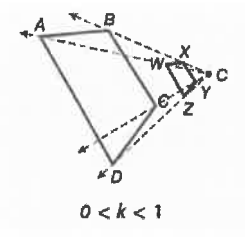
Enlargement:



a dilation w/ a scale factor greater than 1

★ produces larger image ★

Reduction:

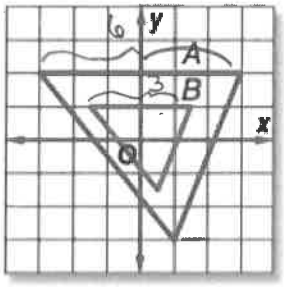


a dilation w/ a scale factor between 0 and 1

★ produces smaller image ★

1. Determine whether the dilation from A to B is an enlargement or a reduction. Then find the scale factor of the dilation.

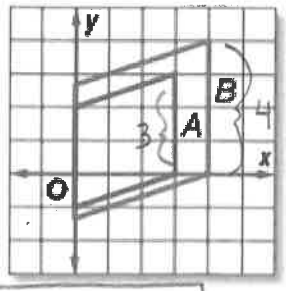
a.



B is smaller than A, so the dilation is a reduction

scale factor = $\frac{3}{6} = \frac{1}{3}$

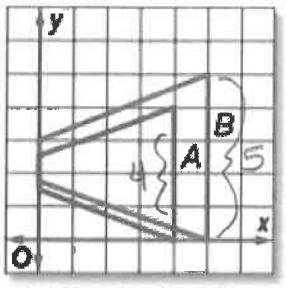
b.



enlargement

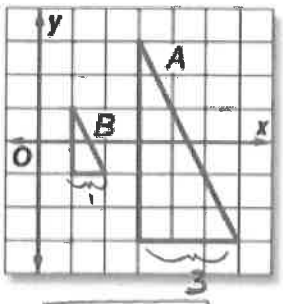
scale factor = $\frac{4}{3}$

c.



enlargement
5/4

d.



reduction
1/3