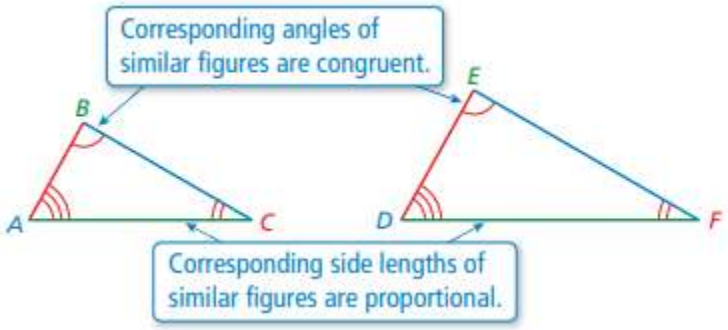
Section 2.6: Similar Figures Name: _____

In Class Notes

Because dilations do not preserve length, they are not rigid motions.

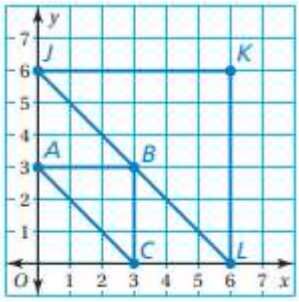
A _____ _____ is a dilation or a sequence of dilations and rigid motions. Two figures are _____ _____ when one can be obtained from the other using a similarity transformation. Similar figures have the_____ _____, but not necessarily the_____ _____.



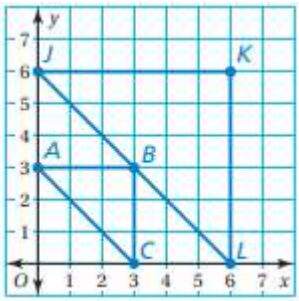
Side Lengths ***Angles***

$\frac{AB}{DE} = \frac{BC}{EF} = \frac{AC}{DF}$ $\angle A \cong \angle D, \angle B \cong \angle E, \angle C \cong \angle F$

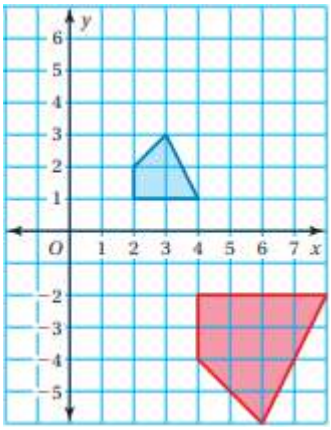
Ex:) Determine whether ΔABC and ΔJKL are similar. Notes:



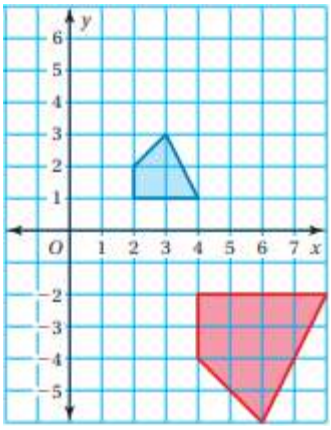
OYO:) A triangle has vertices D(0, 4), E(5, 4), and F(5, 0). Notes:
Is ΔDEF similar to ΔABC and ΔJKL in Example 1? Explain.



Ex:) The red figure is similar to the blue figure. Describe a similarity transformation between the figures. Notes:



OYO:) Can you reflect the red figure first and then perform a dilation to obtain the blue figure? Notes:



Ex:) An artist draws a replica of a painting that is on a remaining piece of the Berlin Wall. The painting includes a red trapezoid that has a shorter base of 15 inches, and a height of 12 inches. The shorter base of the similar trapezoid in the replica is 3.75 inches. What is the height h of the trapezoid in the replica?

Notes:

Ex:) A medical supplier sells gauze in large and small rectangular sheets. A large sheet has a length of 9 inches and an area of 45 square inches. A small sheet has a length of 4 inches and a width of 3 inches. Are the sheets similar? Justify your answer.

Notes:

OYO:) The sail on a souvenir boat is similar in shape to the sail on a sailboat. The sail on the sailboat is in the shape of a right triangle with a base of 9 feet and a height of 9 feet. The height of the souvenir's sail is 3 inches. What is the base of the souvenir's sail?

Notes: