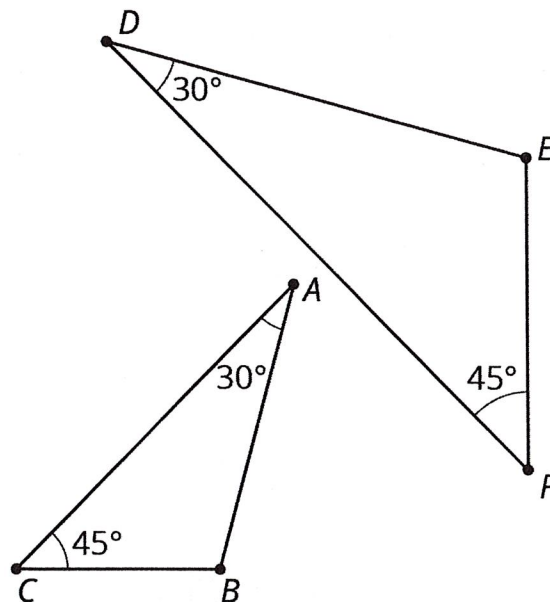


Unit 2 Lesson 8 Summary

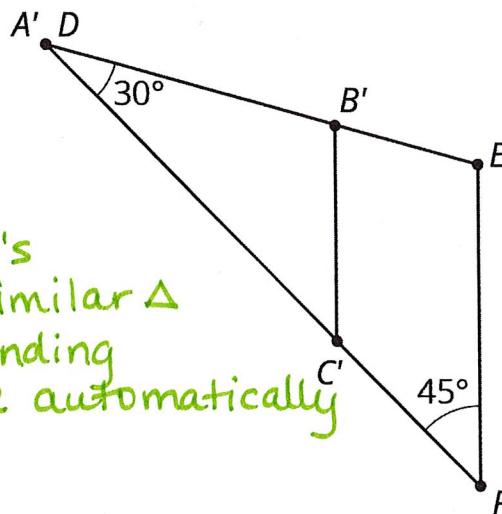
We learned earlier that two polygons are similar when there is a sequence of translations, rotations, reflections, and dilations taking one polygon to the other. When the polygons are triangles, we only need to check that both triangles have two corresponding angles to show they are similar—can you tell why?

* If you know 2 \angle 's in a Δ you can find the 3rd \angle because all of the angles total 180°

Here is an example. Triangle ABC and triangle DEF each have a 30 degree angle and a 45 degree angle.



We can translate A to D and then rotate so that the two 30 degree angles are aligned, giving this picture:



* If all of the corresponding \angle 's match in a similar Δ then the corresponding side lengths are automatically proportional.

Now a dilation with center D and appropriate scale factor will move C' to F . This dilation also moves B' to E , showing that triangles ABC and DEF are similar.