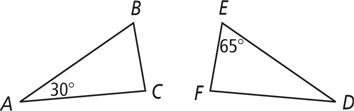
Given ∆*ABC* ≅ ∆*DEF, m*∠*A* = 30, and *m*∠*E* = 65, what is *m*∠*C?*

How might you solve this problem? Sketch both triangles,   
and put all the information on both diagrams.

*m*∠*A* = 30; therefore, *m*∠*D* = 30. How do you know?   
Because ∠*A* and ∠*D* are corresponding parts of congruent triangles.

**Exercises**

**Work through the exercises below to solve the problem above.**

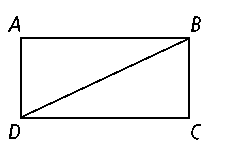
**1.** What angle in ∆*ABC* has the same measure as ∠*E?* What is the measure of that angle? Add the information to your sketch of ∆*ABC.*

**2.** You know the measures of two angles in ∆*ABC.* How can you find the measure of the third angle?

**3.** What is *m*∠*C*?How did you find your answer?

4-6:

**4. Add the information to the diagram implied by each given statement.**

 Given: ∠*A* and ∠*C* are right angles.

Given: and *.*

Given: ∠*ADB* ≅ ∠*CBD.*

**5.** Can you conclude that ∠*ABD* ≅ ∠*CDB* using the given information above?

**6.** How can you conclude that the third side of both triangles is congruent?