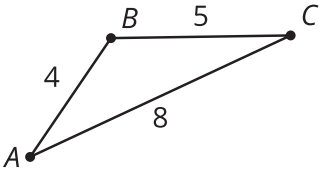
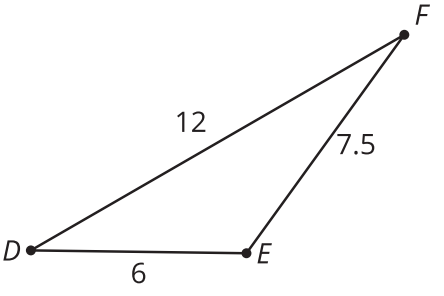
Lesson 10 Practice Problems

1. a. Explain how we know that triangle ABC and triangle DEF are similar.



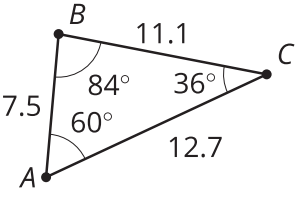
b. What does that tell us about angle D?

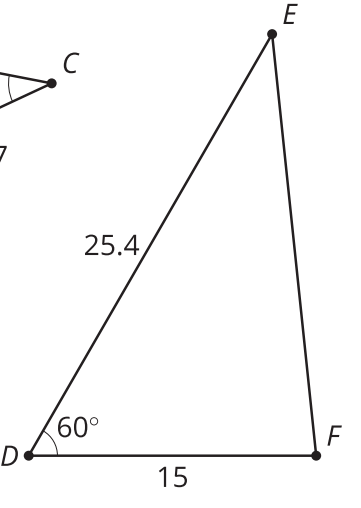


2. a. Find the length of EF.

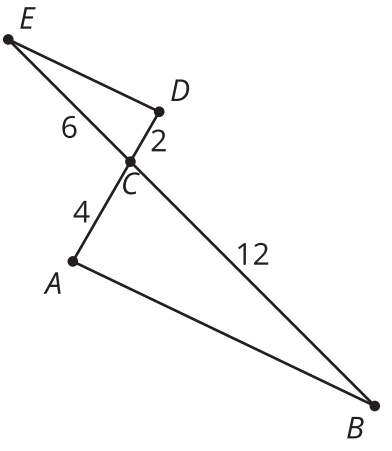
b. Find the measure of angle E.

c. Find the measure of angle F.

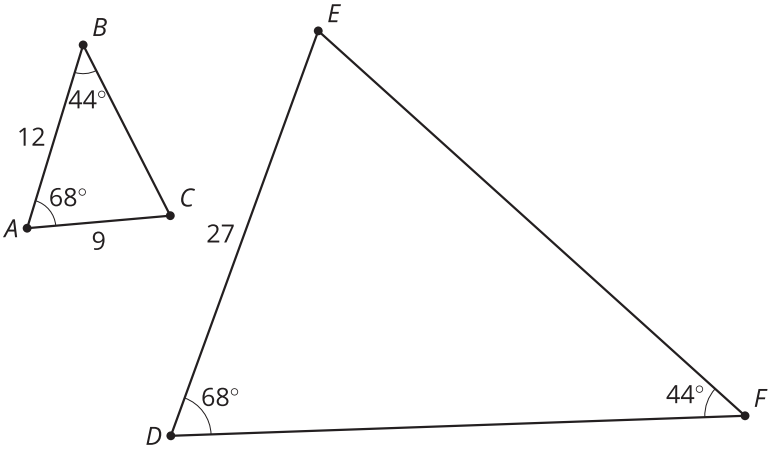




3. Decide whether triangles ABC and DEC are similar. Explain or show your reasoning.



4. What is the length of segment DF?



A. 3 units

B. $\frac{81}{4}$ units

C. 36 units

D. 48 units

(From Unit 3, Lesson 9.)

5. In triangle ABC, angle A is 75° and angle B is 20°. Select the triangle that is similar to triangle ABC.

   A. triangle DEF where angle D is 75° and angle E is 20°

   B. triangle DEF where angle D is 20° and angle E is 75°

   C. triangle DEF where angle D is 85° and angle E is 20°

   D. triangle DEF where angle D is 20° and angle F is 85°

(From Unit 3, Lesson 9.)

6. Sketch a pair of rectangles that are similar.

(From Unit 3, Lesson 8.)

7. Determine if each statement must be true, could possibly be true, or definitely can't be true. Explain or show your reasoning.

   a. Two line segments are similar.

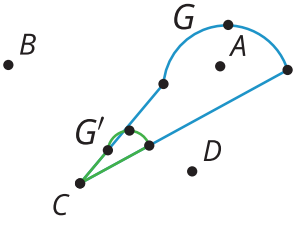
   b. Two angles are similar.

(From Unit 3, Lesson 7.)

8. Figure G' is the image of Figure G by a dilation.

   a. Where is the center of this dilation?

   b. Estimate the scale factor.



(From Unit 3, Lesson 2.)