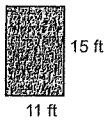
7.GM.2 Identify and describe similarity relationships of polygons including the angle-angle criterion for similar triangles, and solve problems involving similarity.

I can...problems using similar figures

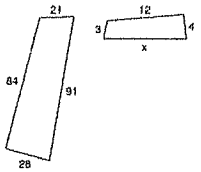
Vocabulary
Similar--same shape, but different sizes. *All angles are equal* and sides AND PERIMETER are proportional
Corresponding sides- The sides of similar figures that are in the same relative position.

I DO

Are these similar?



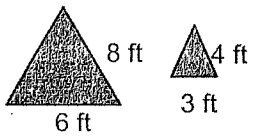
Find the missing side length



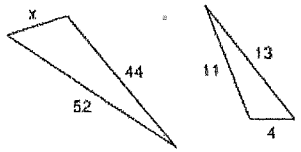
A 6-foot scarecrow in a farmer's field casts a shadow that is 21 feet long. A dog standing next to the scarecrow is 2 feet tall. How long is the dog's shadow?

WE DO

Are these similar?

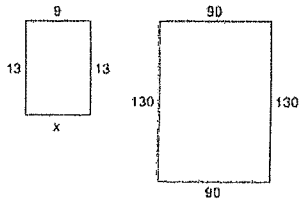


Find the missing length.



A photographer prints a picture that is 4 inches long and 6 inches tall. She decides to make it bigger. She makes it 10 long, to keep the picture to scale, how tall should it be?

YOU DO



In the early afternoon, a tree casts a shadow that is 2 feet long. A 4.2-foot-tall boy standing next to the tree casts a shadow that is 0.7 feet long. How tall is the tree?

Name _____ Similar Figure Word Problems

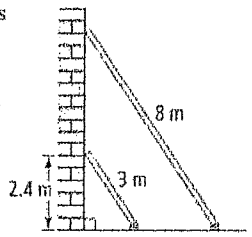
1. A 40-foot flagpole casts a 25-foot shadow. Find the shadow cast by a nearby building 200 feet tall.

2. Triangles IJK and TUV are similar. The length of the sides of IJK are 40, 50, and 24. The length of the longest side of TUV is 275, what is the length of the shortest side of TUV? (draw a diagram and solve)

3. A tree with a height of 4m casts a shadow 15 m long on the ground. How high is another tree that casts a shadow which is 20 m long? (draw a diagram and solve)

4. Jermaine is painting a mountain scene from a $3\frac{3}{5}$ inch by 6 inch postcard. He wants the painting to be proportional to the post card. If he wants to enlarge the scene so that it has a long side of 15 inches, how long should the short side be?

5. . Two extension ladders are leaning at the same angle against a vertical wall. The 3-m ladder reaches 2.4 m up the wall. How much farther up the wall does the 8-m ladder reach?



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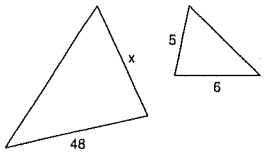

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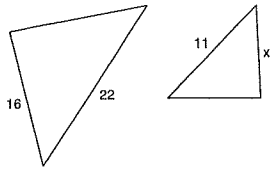

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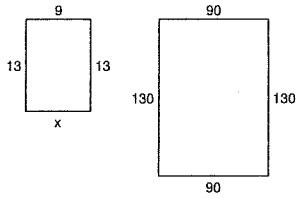

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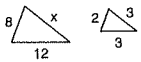

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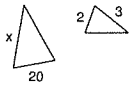

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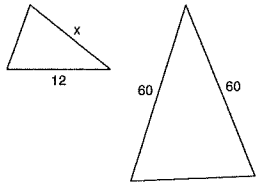

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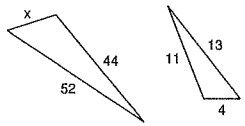

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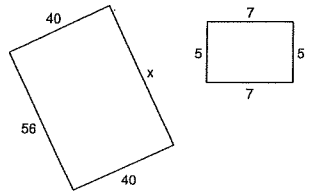

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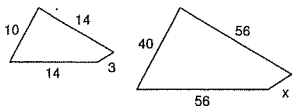

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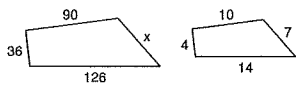

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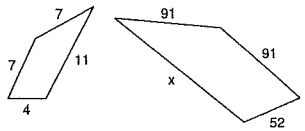

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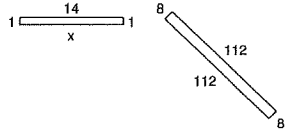

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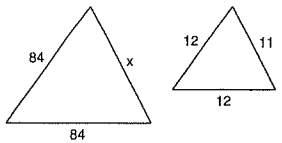

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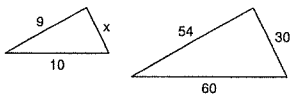

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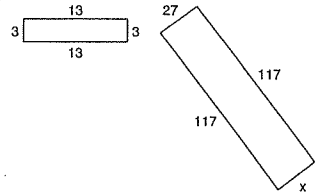

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