

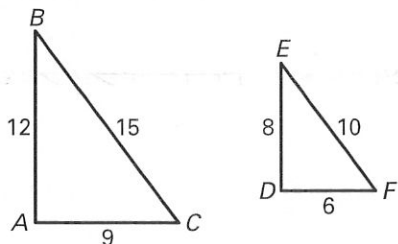
LESSON 6.4

Practice A

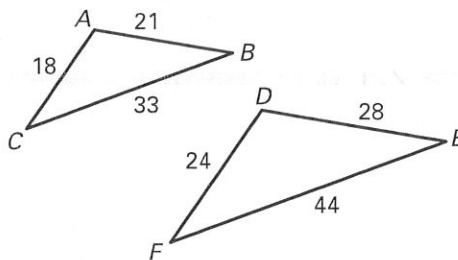
For use with the lesson "Prove Triangles Similar by SSS and SAS"

Verify that $\triangle ABC \sim \triangle DEF$. Find the scale factor of $\triangle ABC$ to $\triangle DEF$.

1.

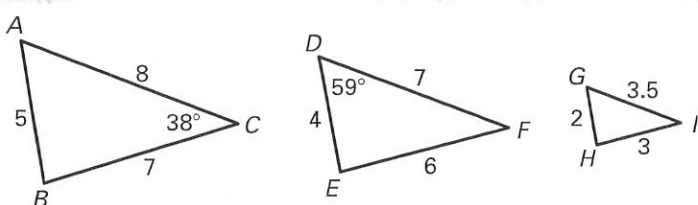


2.

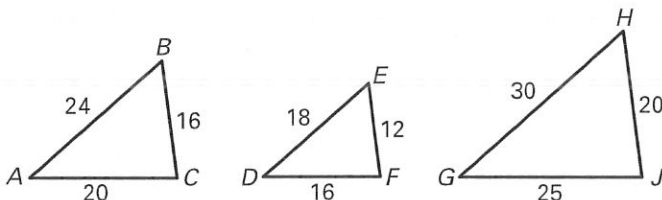


Determine which two of the three triangles are similar. Find the scale factor for the pair.

3.

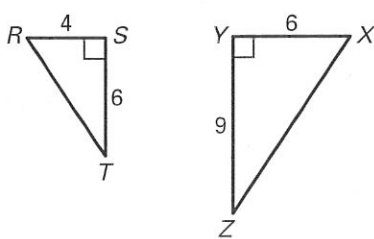


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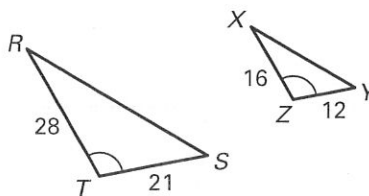


Verify that $\triangle RST \sim \triangle XYZ$. Find the scale factor of $\triangle RST$ to $\triangle XYZ$.

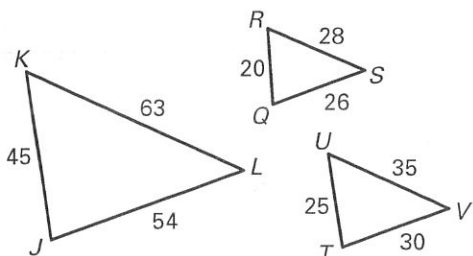
5.



6.



7. Determine which two of the three triangles are similar. Find the scale factor for the pair.



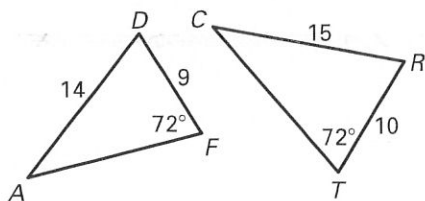
LESSON 6.4

Practice A *continued*

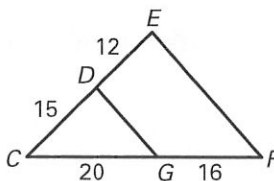
For use with the lesson "Prove Triangles Similar by SSS and SAS"

Is there enough information to determine whether the triangles are similar? If so, write a similarity statement and find the scale factor.

8.

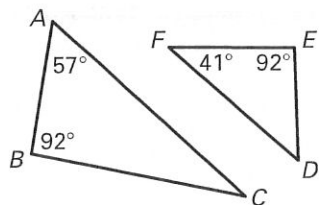


9.

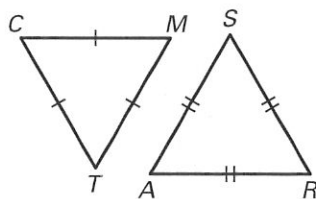


Are the triangles similar? If so, state the similarity and the postulate or theorem that justifies your answer.

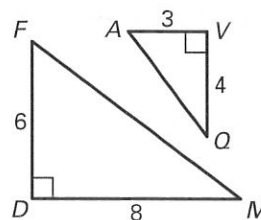
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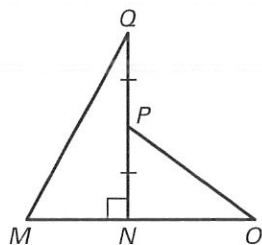
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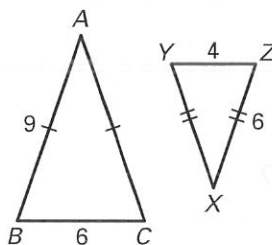
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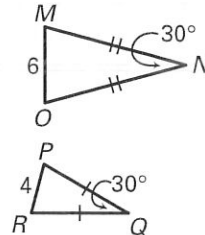
13.



14.



15.



Sketch the triangles using the given description. Explain whether the two triangles can be similar.

16. In $\triangle ABC$, $m\angle B = 60^\circ$, $AB = 6$, and $BC = 12$.

In $\triangle XYZ$, $m\angle Y = 60^\circ$, $XY = 3$, and $YZ = 6$.

17. In $\triangle ABC$, $m\angle A = 15^\circ$ and $m\angle B = 80^\circ$.

In $\triangle XYZ$, $m\angle Y = 80^\circ$ and $m\angle Z = 85^\circ$.

18. **Fallen Tree** A large tree has fallen against another tree and rests at an angle as shown in the figure. To estimate the length of the tree from the ground, you make the measurements shown in the figure.

- What theorem or postulate can be used to show that the triangles in the figure are similar?
- Explain how you can use similar triangles to estimate the length of the tree. Then estimate the length.

