

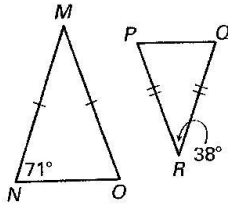
Name _____

Date _____

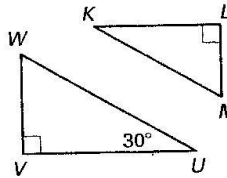
LESSON 6.4 Practice A *continued*
For use with pages 381-387

Determine whether the triangles can be proved similar. If they are similar, write a similarity statement. Explain your reasoning.

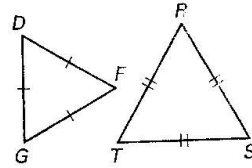
13.



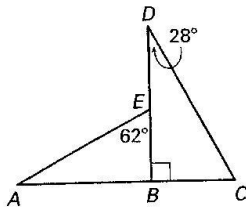
14.



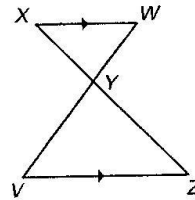
15.



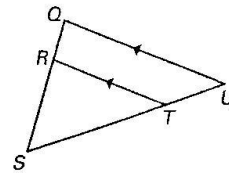
16.



17.

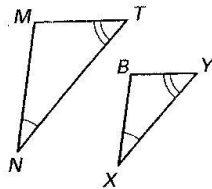


18.

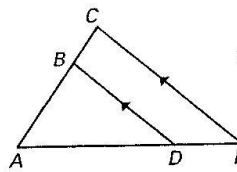


Show that the triangles are similar.

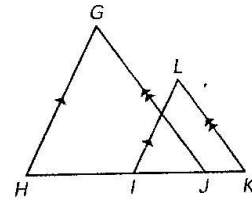
19.



20.



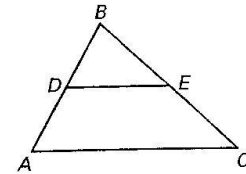
21.



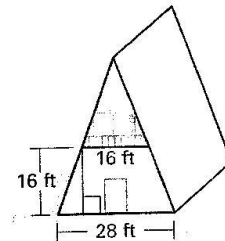
22. **Proof** Write a two-column or paragraph proof.

GIVEN: \overline{DE} is a midsegment of $\triangle ABC$.

PROVE: $\triangle ABC \sim \triangle DBE$



23. **A-Frame** The A-frame building shown in the figure has a balcony that is 16 feet long, 16 feet high, and parallel to the ground. The building is 28 feet wide at its base. How tall is the A-frame building?



Name _____

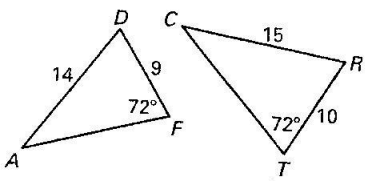
Date _____

LESSON
6.5

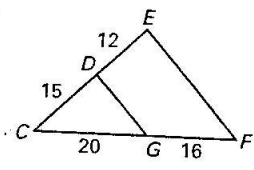
Practice A *continued*
For use with pages 388–395

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

8.

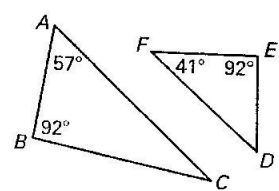


9.

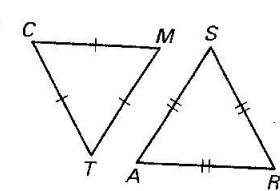


Are the triangles similar? If so, state the similarity and the postulate or theorem that justifies your answer.

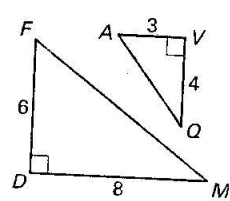
10.



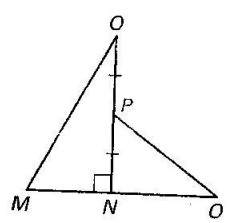
11.



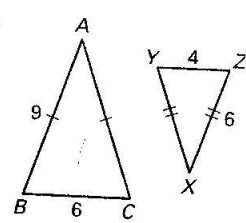
12.



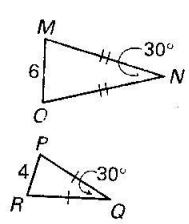
13.



14.



15.



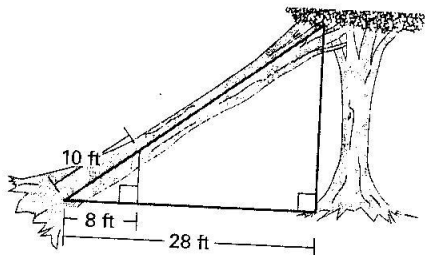
Sketch the triangles using the given description. Explain whether the two triangles can be similar.

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.



Copyright © by McDougal Littell, a division of Houghton Mifflin Company.

LESSON 6.5