LESSON 8.5

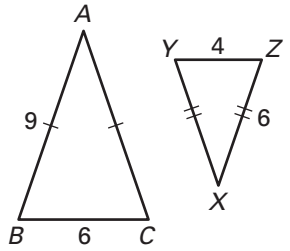
NAME _____ DATE _____

Practice B

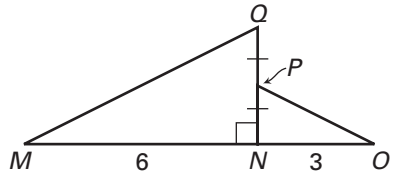
For use with pages 488–496

Name a postulate or theorem that can be used to prove that the two triangles are similar. Then, write a similarity statement.

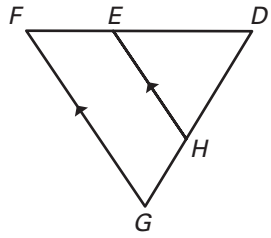
1.



2.

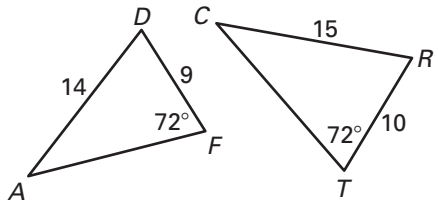


3.

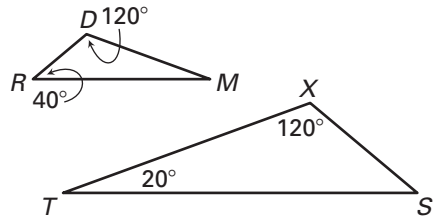


Are the triangles similar? If so, state the similarity and the postulate or theorem that justifies your answer.

4.



5.



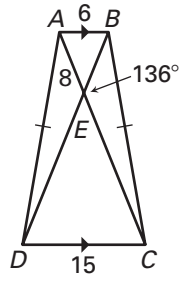
Draw the given triangles roughly to scale. Then, name a postulate or theorem that can be used to prove that the triangles are similar.

6. The side lengths of $\triangle ABC$ are 3, 4, and 6, and the side lengths of $\triangle XYZ$ are 6, 8, and 12.

7. In $\triangle ABC$, $m\angle A = 15°$ and $m\angle B = 80°$. In $\triangle XYZ$, $m\angle Y = 80°$ and $m\angle Z = 85°$.

8. In $\triangle ABC$, $m\angle B = 60°$, $AB = 6$, and $BC = 12$. In $\triangle XYZ$, $m\angle Y = 60°$, $XY = 3$, and $YZ = 6$.

Use the diagram shown to complete the statements.



9. $\triangle AEB \sim$?

10. $m\angle DEC =$?

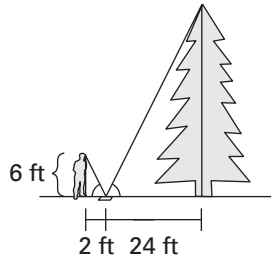
11. $m\angle EBA =$?

12. $EC =$?

13. perimeter $\triangle DEC$: perimeter $\triangle BEA =$?

In Exercises 14 and 15, use the diagram at the right.

To determine the height of a very tall pine tree, you place a mirror on the ground and stand where you can see the top of the tree, as shown.



14. How tall is the tree?

15. Your little sister wants to see the top of the tree also. However, she is only 4 feet tall. Leaving the mirror 2 feet from her feet, how far from the base of the tree should the mirror be placed?

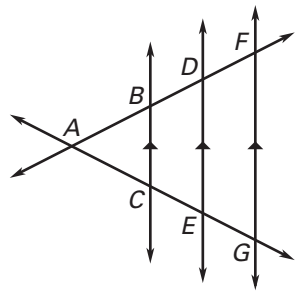
LESSON 8.6

NAME _____ DATE _____

Practice A

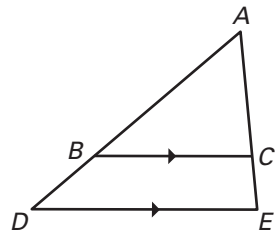
For use with pages 498–505

Use the figure to complete the proportions.



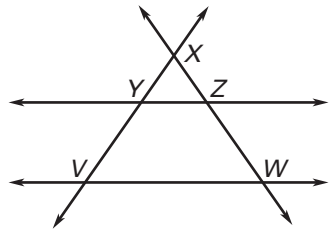
1. $\frac{AB}{AF} = \frac{BC}{?}$
2. $\frac{BD}{DF} = \frac{?}{EG}$
3. $\frac{AD}{BD} = \frac{AE}{?}$
4. $\frac{AC}{AG} = \frac{AB}{?}$
5. $\frac{DE}{FG} = \frac{AD}{?}$
6. $\frac{AB}{DF} = \frac{?}{EG}$

Determine whether the statement is *true* or *false*. Explain your reasoning.



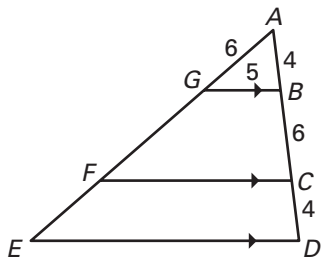
7. $\frac{AB}{BD} = \frac{AC}{CE}$
8. $\frac{AC}{CE} = \frac{BC}{DE}$
9. $\frac{EC}{CA} = \frac{ED}{CB}$
10. $\frac{DB}{BA} = \frac{EC}{CA}$

Determine whether the given information implies $\overline{YZ} \parallel \overline{VW}$. If they are parallel, state the reason.



11. $\frac{XY}{XV} = \frac{XZ}{XW}$
12. $\frac{XY}{YV} = \frac{XZ}{ZW}$
13. $\triangle XYZ \sim \triangle XVW$
14. $\angle VYZ \cong \angle WZY$

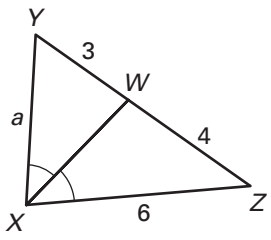
Use the figure to match the segment with its length.



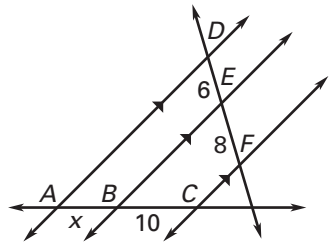
A. 9
B. $12\frac{1}{2}$
C. 6
D. $17\frac{1}{2}$
15. $\overline{GF}$
16. $\overline{FC}$
17. $\overline{ED}$
18. $\overline{FE}$

Find the value of the variable.

19.



20.



21.