LESSON 8.5

NAME _____ DATE _____

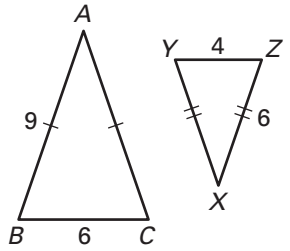
# Practice B

**For use with pages 488–496**

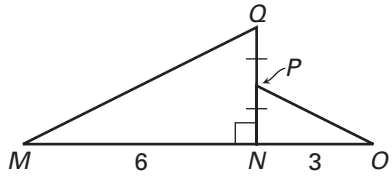


**Name a postulate or theorem that can be used to prove that the two triangles are similar. Then, write a similarity statement.**

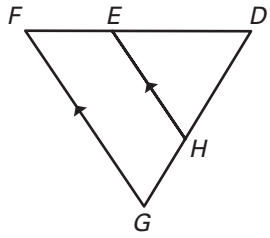
**1.**




**2.**

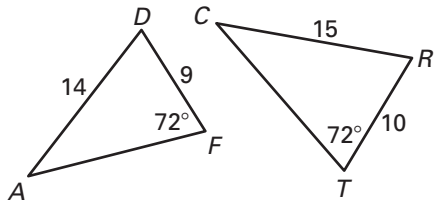



**3.**

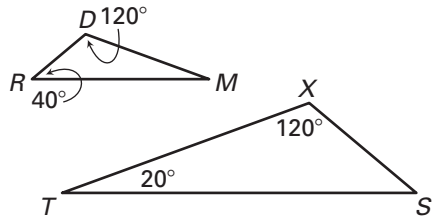



**Are the triangles similar? If so, state the similarity and the postulate or theorem that justifies your answer.**

**4.**




**5.**



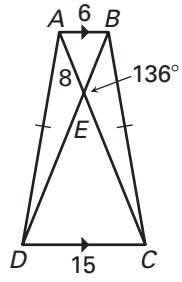

**Draw the given triangles roughly to scale. Then, name a postulate or theorem that can be used to prove that the triangles are similar.**

**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.** $m\angle DEC =$ ?

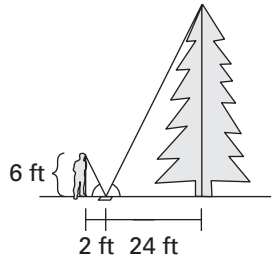
**11.** $m\angle EBA =$ ?

**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?