CONGRUENT TRIANGLES

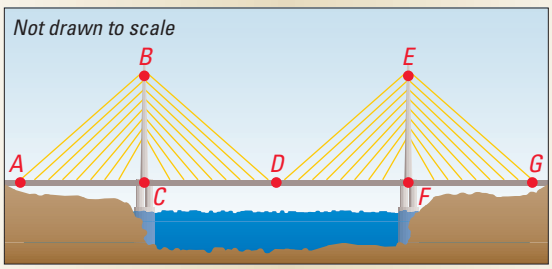
How does a cable-stayed bridge work?

CHAPTER
4

APPLICATION: Bridges

On a cable-stayed bridge, the cables attached to the sides of each tower transfer the weight of the roadway to the tower.

You can see from the diagram below that the cables balance the weight of the roadway on both sides of each tower.



Think & Discuss

1. In the diagram above, what type of angle does each tower of the bridge make with the roadway?
2. Use the diagram above. Find at least one pair of acute angles that appear to be congruent and one pair of obtuse angles that appear to be congruent.

Learn More About It

You will prove that triangles formed by the cables and towers of a cable-stayed bridge are congruent in Exercise 16 on p. 234.

INTERNET **APPLICATION LINK** Visit www.mcdougallittell.com for more information about bridge construction.