

Describe each angle as it relates to the situation in the diagram.

See Problem 1

9.  $\angle 1$

10.  $\angle 2$

11.  $\angle 3$

12.  $\angle 4$

13.  $\angle 5$

14.  $\angle 6$

15.  $\angle 7$

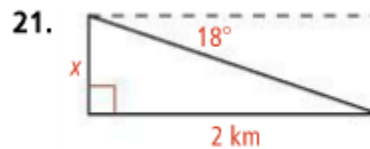
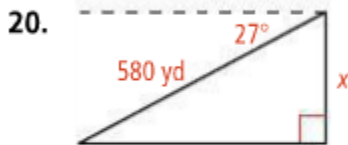
16.  $\angle 8$



- STEM 19. Meteorology** A meteorologist measures the angle of elevation of a weather balloon as  $41^\circ$ . A radio signal from the balloon indicates that it is 1503 m from his location. To the nearest meter, how high above the ground is the balloon?

Find the value of  $x$ . Round to the nearest tenth of a unit.

See Probl



- 22. Indirect Measurement** A tourist looks out from the crown of the Statue of Liberty, approximately 250 ft above ground. The tourist sees a ship coming into the harbor and measures the angle of depression as  $18^\circ$ . Find the distance from the base of the statue to the ship to the nearest foot.
- 23. Flagpole** The world's tallest unsupported flagpole is a 282-ft-tall steel pole in Surrey, British Columbia. The shortest shadow cast by the pole during the year is 137 ft long. To the nearest degree, what is the angle of elevation of the sun when casting the flagpole's shortest shadow?

33. **Aerial Television** A blimp provides aerial television views of a football game. The television camera sights the stadium at a  $7^\circ$  angle of depression. The altitude of the blimp is 400 m. What is the line-of-sight distance from the television camera to the base of the stadium? Round to the nearest hundred meters.

