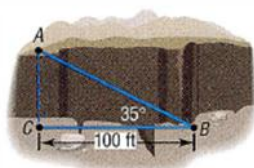
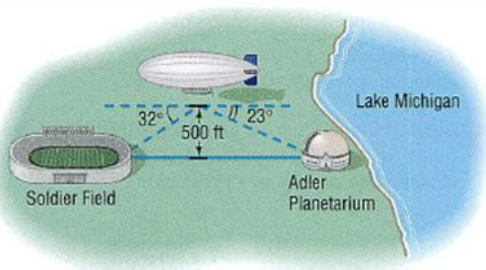


1. **Finding the Width of a Gorge** Find the distance from A to C across the gorge illustrated in the figure.



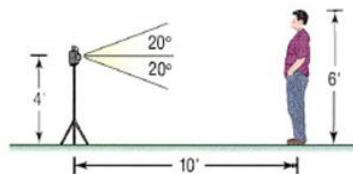
2. **Finding the Height of a Tower** A guy wire 80 feet long is attached to the top of a radio transmission tower, making an angle of 65° with the ground. How high is the tower?

3. **Finding the Distance between Two Objects** A blimp, suspended in the air at a height of 500 feet, lies directly over a line from Soldier Field to the Adler Planetarium on Lake Michigan (see the figure). If the angle of depression from the blimp to the stadium is 32° and from the blimp to the planetarium is 23° , find the distance between Soldier Field and the Adler Planetarium.



4. **Mt. Rushmore** To measure the height of Lincoln's caricature on Mt. Rushmore, two sightings 800 feet from the base of the mountain are taken. If the angle of elevation to the bottom of Lincoln's face is 32° and the angle of elevation to the top is 35° , what is the height of Lincoln's face?

5. **Photography** A camera is mounted on a tripod 4 feet high at a distance of 10 feet from George, who is 6 feet tall. See the illustration. If the camera lens has angles of depression and elevation of 20° , will George's feet and head be seen by the lens? If not, how far back will the camera need to be moved to include George's feet and head?



ANSWERS:

1. 70.02 ft
2. 72.50 ft
3. 1978.09 ft
4. 60.27 ft
5. No, 0.99 ft