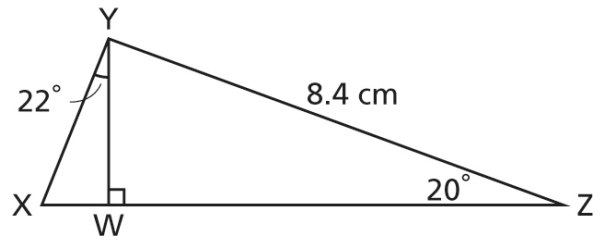# Sec. 2.7 Solving Problems Involving More than One Right Triangle

**1.** Calculate the length of XY to the nearest tenth of a centimetre.

2. A surveyor stands at a window on the 9th floor of an office tower. He uses a clinometer to measure the **angles of elevation and depression** of the top and the base of a taller building. The surveyor sketches this plan of his measurements. Determine the height of the taller building to the nearest tenth of a metre.

Angle of elevation =

Angle of depression =
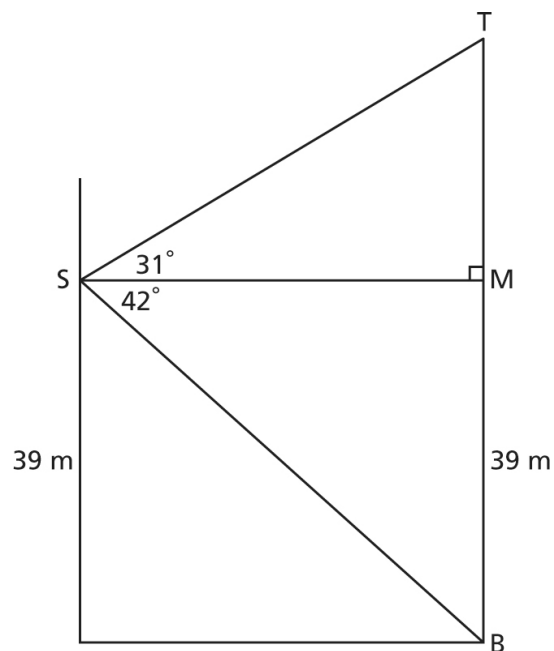
3. A communications tower is 35 m tall. From a point due north of the tower, Tannis measures the angle of elevation of the top of the tower as 70°. Her brother Leif, who is due east of the tower, measures the angle of elevation of the top of the tower as 50°. How far apart are the students to the nearest metre? The diagram is *not* drawn to scale.