

The Seattle Space Needle casts a 67-meter shadow. If the angle of elevation from the tip of the shadow to the top of the Space Needle is 70° , how tall is the Space Needle? Round to the nearest meter.

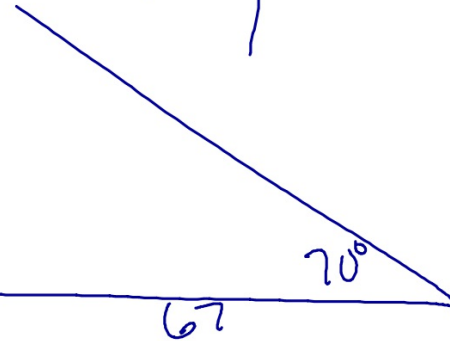
$$x = 184 \text{ m}$$



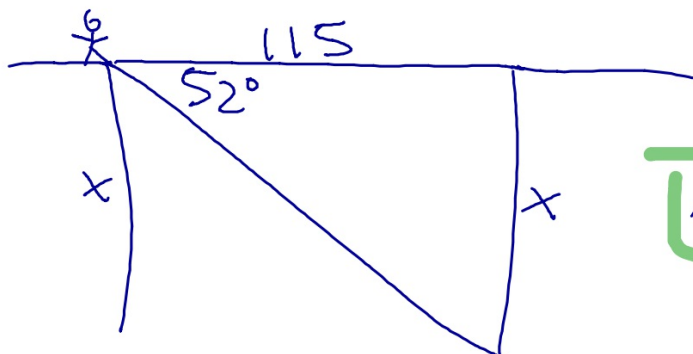
x



$$\frac{\tan 70^\circ}{1} = \frac{x}{67}$$



An ice climber stands at the edge of a crevasse that is 115 ft wide. The angle of depression from the edge where she stands to the bottom of the opposite side is 52° . How deep is the crevasse at this point? Round to the nearest foot.



$$\frac{\tan 52^\circ}{1} = \frac{x}{115}$$

$$x = 147 \text{ ft}$$