

The Law of Sines

Find each measurement indicated. Round your answers to the nearest tenth.

1) Find AC

$$\frac{a}{\sin 118^\circ} = \frac{b}{\sin 22^\circ}$$

$$= \frac{24}{\sin 40^\circ}$$

$$b = \frac{24 \sin 22^\circ}{\sin 40^\circ} \approx 14$$

$$a = \frac{24 \sin 118^\circ}{\sin 40^\circ} \approx 33$$

2) Find AB

$$\frac{a}{\sin 83^\circ} = \frac{7}{\sin 44^\circ}$$

$$= \frac{c}{\sin 53^\circ}$$

3) Find BC

$$\sin 51^\circ = \frac{c}{27}$$

$$\cos 51^\circ = \frac{a}{27}$$

4) Find AB

$$\frac{9}{\sin 16^\circ} = \frac{b}{\sin 101^\circ} = \frac{c}{\sin 63^\circ}$$

5) Find BC

$$\frac{a}{\sin 93^\circ} = \frac{16}{\sin 29^\circ} = \frac{c}{\sin 58^\circ}$$