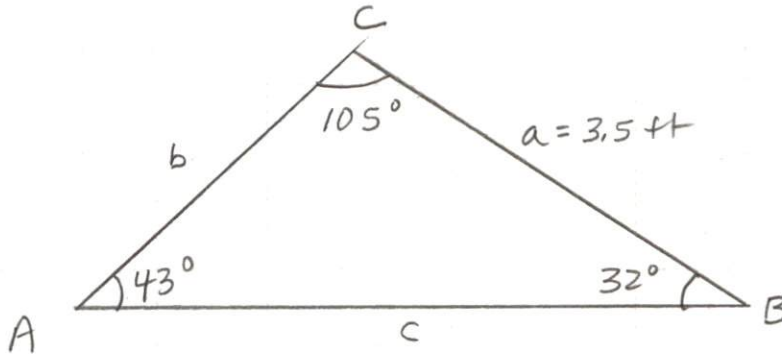


In Problems 1-43 to 1-47, find the unknown elements of an oblique triangle if three elements are given. See Fig. 1-7 for the notations used.

1-44 $a = 3.5 \text{ ft}$, $B = 32^\circ$, $C = 105^\circ$

Solution.

$$A = 180^\circ - 32^\circ - 105^\circ = 43^\circ$$



Law of Sines

$$\frac{b}{\sin 32^\circ} = \frac{c}{\sin 105^\circ} = \frac{3.5 \text{ ft}}{\sin 43^\circ}$$

$$b = \frac{\sin 32^\circ (3.5 \text{ ft})}{\sin 43^\circ} = 2.72 \text{ ft}$$

$$c = \frac{\sin 105^\circ (3.5 \text{ ft})}{\sin 43^\circ} = 4.96 \text{ ft}$$