

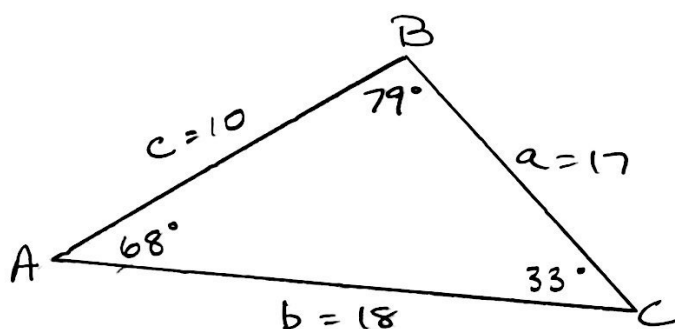
Warm Up Solve the Triangle

Warm-up: Solve triangle ABC given:

$$a = 17, b = 18 \text{ \& } B = 79^\circ$$

(round to the tenth)

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$



$$\textcircled{2} \quad 180^\circ - 79^\circ - 68^\circ = \boxed{33^\circ}$$

$$\textcircled{3} \quad \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$(\sin 33^\circ) \frac{18}{\sin 79^\circ} = \frac{c}{\sin 33^\circ} \quad (\sin 33^\circ)$$

$$\boxed{c = 10}$$

$$\textcircled{1} \quad \frac{a}{\sin A} = \frac{b}{\sin B}$$

$$\frac{17}{\sin A} = \frac{18}{\sin 79^\circ} \quad \text{cross multiply}$$

$$\frac{17 \sin 79^\circ}{18} = \frac{18 \sin A}{18} \quad \text{divide by 18}$$

$$\frac{17 \sin 79^\circ}{18} = \sin A \quad \text{use inverse sin}$$

$$A = \sin^{-1} \frac{17 \sin 79^\circ}{18}$$

$$\boxed{A = 68^\circ}$$