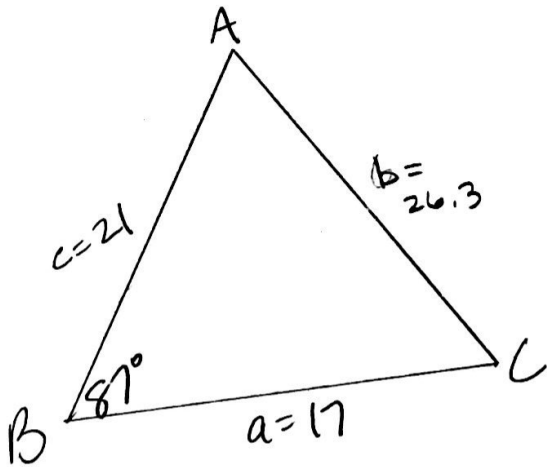


Warm-up: Solve triangle ABC given:

$$a = 17, c = 21, B = 87^\circ$$

(round to the tenth)

SAS



$$\textcircled{1} b^2 = a^2 + c^2 - 2ac \cos B$$

$$b^2 = 17^2 + 21^2 - 2(17)(21) \cos 87^\circ$$

$$b^2 = 730 - 714 \cos 87^\circ$$

$$b^2 = 692.6321$$

$$b = 26.3$$

$$\textcircled{2} a^2 = b^2 + c^2 - 2bc \cos A$$

$$17^2 = 26.3^2 + 21^2 - 2(26.3)(21) \cos A$$

$$289 = 1132.69 - 1104.6 \cos A$$

$$\begin{array}{r} -1132.69 \\ \hline -843.69 = -1104.6 \cos A \end{array}$$

$$\begin{array}{r} -843.69 \\ \hline -1104.6 \end{array} = \begin{array}{r} -1104.6 \cos A \\ \hline -1104.6 \end{array}$$

$$A = \cos^{-1} \frac{843.69}{1104.6}$$

$$A = 40.2^\circ$$

$$\textcircled{3} 180 - 40.2 - 87$$

$$C = 52.8^\circ$$