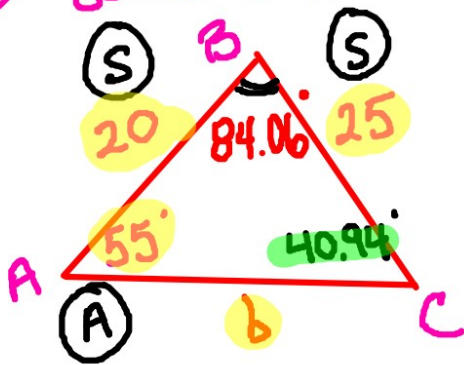


DRILL

$$* \frac{25}{\sin 55^\circ} = \frac{20}{\sin C}$$

① Solve the triangle:



$$\frac{20 \sin 55^\circ}{25} = \frac{25 \sin C}{25}$$

$$C = \sin^{-1}\left(\frac{20 \sin 55^\circ}{25}\right)$$

$$C \approx 40.94^\circ$$

$$180 - 40.49$$

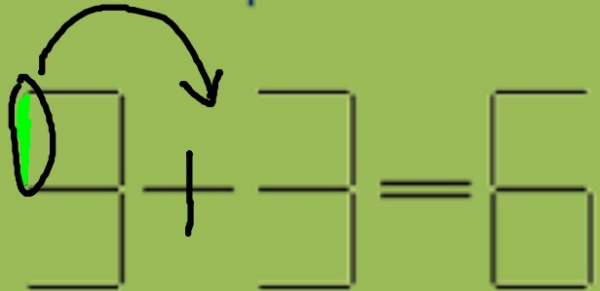
$$\underline{\underline{139.51}}$$

$$\frac{25}{\sin 55^\circ} = \frac{b}{\sin 84.06^\circ}$$

$$\frac{25 \sin 84.06^\circ}{\sin 55^\circ} = \frac{b \cancel{\sin 55^\circ}}{\cancel{\sin 55^\circ}}$$

$$b \approx 30.36$$

Move one matchstick to get another correct equation.



Law of Sines (AAS, ASA, SSA)

↑
Ambiguous
Case

Law of Cosines: (SSS, SAS)

#3 Desmos: $X^2 = 20^2 + 25^2 - 2(20)(25)\cos 108^\circ$

$$\sqrt{X^2} \approx \sqrt{1334.017}$$

$$X \approx 36.52$$

$$b^2 = a^2 + c^2 - 2(a)(c) \cos B$$

$$b^2 - a^2 = c^2 - 2(a)(c) \cos B$$

$$\frac{b^2 - a^2 - c^2}{-2ac} = \frac{-\cancel{2ac} \cos B}{-\cancel{2ac}}$$