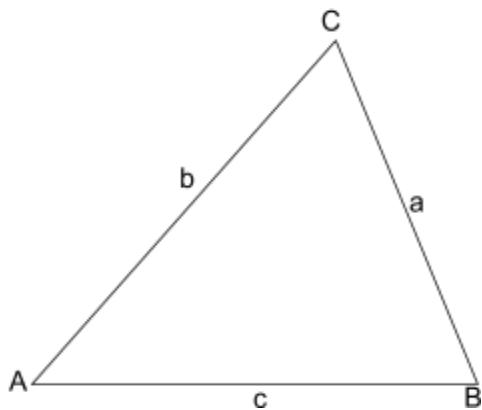


6-1 THE LAW OF SINES

The Law of Sines: $\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$ or $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$



Hint: label vertices with capital letters and sides with lower case letters

Hint: label the side across from each angle with the same letter

Hint: check the mode of your calculator before you start

Example 1: Solve triangle ABC

$$C = 102.3^\circ$$

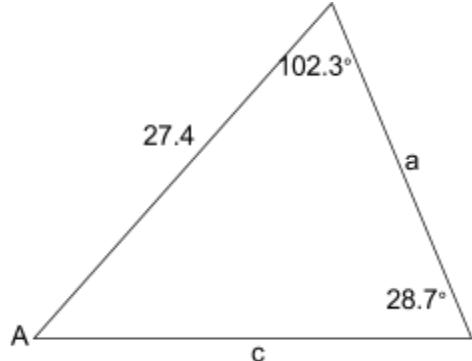
$$B = 28.7^\circ$$

$$b = 27.4$$

Since the three angles of a triangle add to 180° , $A=49^\circ$

$$\frac{\sin 28.7^\circ}{27.4} = \frac{\sin 49^\circ}{a} \rightarrow a \approx 43.1$$

$$\frac{\sin 28.7^\circ}{27.4} = \frac{\sin 102.3^\circ}{c} \rightarrow c \approx 55.7$$



Try two on your own:

Example 2: Solve triangle ABC $c = 22$ $A = 43^\circ$ $B = 98^\circ$

Example 3: Solve triangle ABC $a = 15$ $b = 11$ $A = 75^\circ$

Homework: p.414 #1-7 ALL