To finish the solution for example 2, use the law of sines to find B, and then subtract to find C.

$$\frac{a}{\sin A} = \frac{b}{\sin B} \Rightarrow \frac{10}{\sin 108.2^\circ} = \frac{8}{\sin B} \Rightarrow (10)(\sin B) = (8)(\sin 108.2^\circ)$$

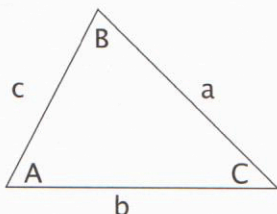$$\sin B = \frac{(8)(\sin 108.2^\circ)}{(10)} = .76$$

$\sin B = .76$ $A + B + C = 180^\circ$

$B = 49.46^\circ$ $108.2^\circ + 49.46^\circ + C = 180^\circ$

                         $C = 22.34^\circ$

Practice Problems 1

Solve to find the lengths of the sides and the measures of the angles to the nearest hundredth. Sketch each triangle to help you estimate the answers.

1. a = 45, b = 56, C = 63°

2. a = 24, B = 24°, c = 27

3. a = 15, b = 16, c = 24

4. a = 28, b = 21, c = 10