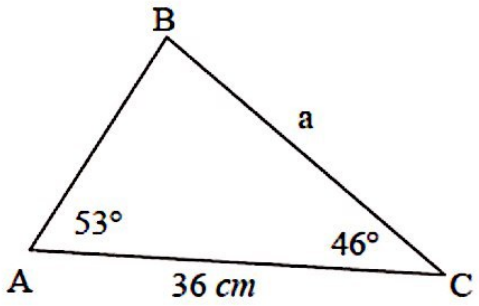
MBF 3C Sine Law Worksheet – Finding Sides

1. Solve for the given variable (correct to 1 decimal place) in each of the following:

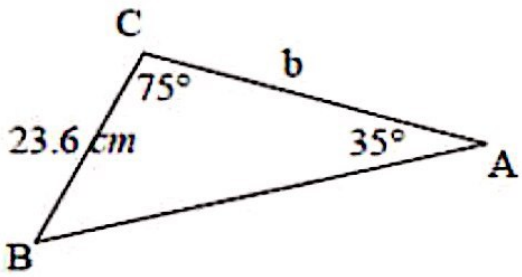
(a) $\frac{a}{\sin 35°} = \frac{10}{\sin 40°}$ (b) $\frac{65}{\sin 75°} = \frac{b}{\sin 48°}$ (c) $\frac{75}{\sin 55°} = \frac{c}{\sin 80°}$

2. Solve for the unknown side (variable) in each triangle.

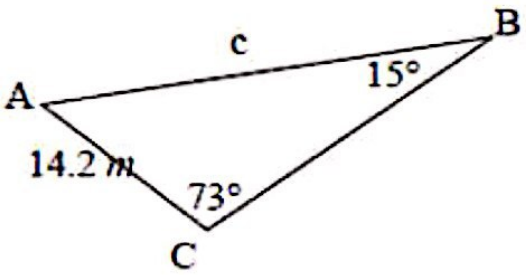
(a)



(b)



(c)



3. For each of the following triangle descriptions you should make a sketch and then find the indicated side rounded correctly to one decimal place.

(a) In ΔABC, given that ∠A = 57°, ∠B = 73°, and AB = 24 cm. Find the length of AC

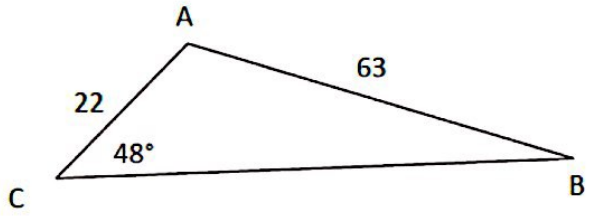
(b) In ΔABC, given that ∠B = 38°, ∠C = 56°, and BC = 63 cm. Find the length of AB

(c) In ΔABC, given that ∠A = 50°, ∠B = 50°, and AC = 27 m. Find the length of AB

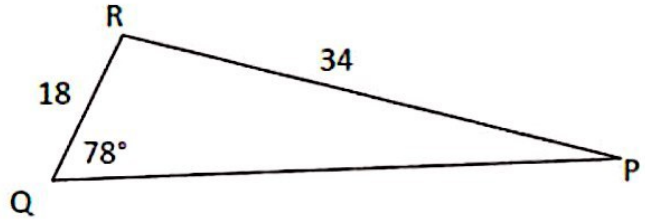
(d) In ΔABC, given that ∠A = 23°, ∠C = 78°, and AB = 15 cm. Find the length of BC

MBF 3C Sine Law Worksheet – Finding Angles

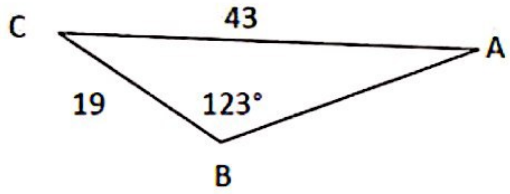
4. Find the measure of angle B, to the nearest degree.



5. Find the measure of angle P, to the nearest degree.



6. Find the measure of angle P, to the nearest degree.



7. For △ ABC, a = 42, c = 72 and <C = 41°.
Find the measure of angle A, to the nearest degree. (Draw and label the △ first!)

Solutions:

1. (a) 8.9 (b) 50.0 (c) 90.2 2. (a) 29.1 *cm* (b) 38.7 *cm* (c) 52.5 *m*
3. (a) 30.0 *cm* (b) 52.4 *cm* (c) 34.7 *m* (d) 6.0 *cm*
4. 15° 5. 31° 6. 22° 7. 23°