MSLC Workshop Series: Math 1149 and 1150
Law of Sines & Law of Cosines Workshop

There are four tools that you will have at your disposal for solving triangles.

1. Similar Triangles:

2. Right Triangle Trigonometry:

3. Law of Sines:

4. Law of Cosines:

Law of Sines

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

Law of Cosines

$$a^2 = b^2 + c^2 - 2bc\cos A$$
$$b^2 = a^2 + c^2 - 2ac\cos B$$
$$c^2 = a^2 + b^2 - 2ab\cos C$$

1. Find the remaining sides and angles of the following triangles:
   a) $\angle B = 58.33°$, $b = 13.56$, $c = 11.76$

b) $\angle B = 10°$, $\angle C = 100°$, $c = 115$

c) $\angle A = 30°$, $a = 75$, $b = 100$

d) $\angle C = 135°$, $b = 80$, $c = 100$

e) $\angle C = 105°$, $b = 18$, $c = 15$

f) $a = 122.5$, $b = 60.1$, $c = 154.6$

g) $\angle C = 98°$, $\angle B = 25°$, $a = 1000$