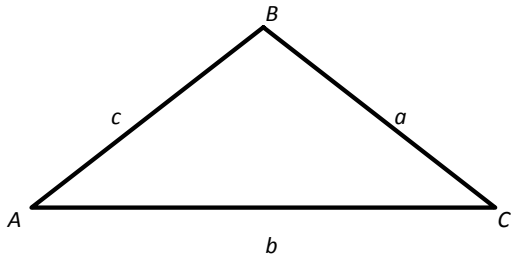
Law of Sines

The Law of Sines is used to solve oblique triangles (triangles that do not have a right angle) when you have an angle-side pair.



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

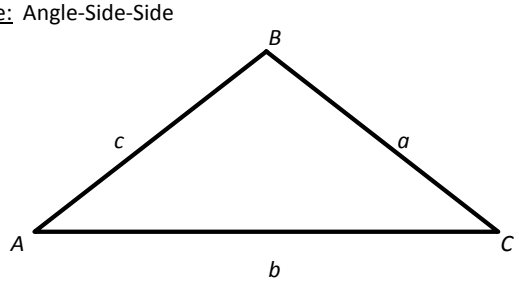
1. Solve the triangle.

$\measuredangle A = 10^\circ$

$a = 4.2$

$\measuredangle B = 62^\circ$

The Ambiguous Case: Angle-Side-Side



No Triangle
One Triangle
Two Triangles

2. Solve each triangle, if possible. If two triangles exist, find both triangles.

a) No Triangle

$\measuredangle A = 50^\circ$
$a = 3.8$
$b = 12.2$

b) One Triangle

$\measuredangle A = 100^\circ$
$a = 125$
$b = 100$

c) Two Triangles

$\measuredangle A = 50^\circ$

$a = 11.4$

$b = 12.6$