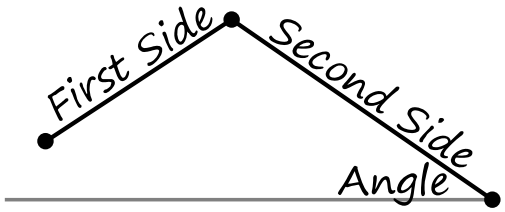
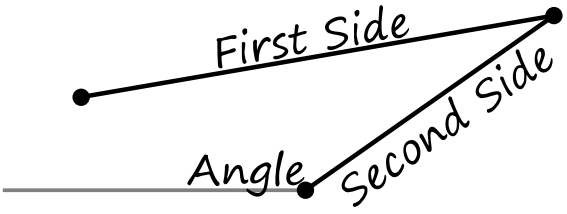
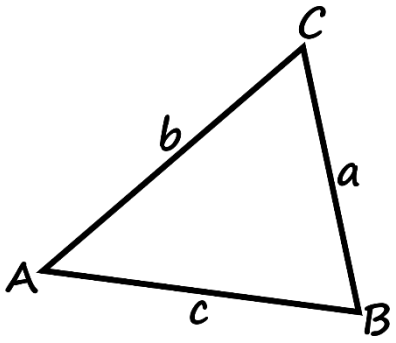
LAW OF SINES: GUIDED NOTES

Ambiguous Case: SSA

When the Given Angle is Acute	When the Given Angle is Right or Obtuse
	

Law of Sines

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



Proof

Use **Law of Sines** to solve any oblique (non-right) triangle, if you are given AAS, ASA, or SSA. Remember SSA is the ***ambiguous case***, so be sure to consider the number of possible solutions.

Examples

Find all solutions (missing side length and angle measurements) for the given triangle, if possible. If no solution exists, write no solution. Round angle measurements to the nearest degree and side lengths to the nearest tenth.

1) $m\angle A = 31°,\ m\angle B = 99°,\ a = 6.7$

2) $m\angle A = 59°,\ a = 5.1,\ c = 5.8$

3) $m\angle A = 75°,\ m\angle B = 60°,\ c = 2.6$

4) $m\angle A = 43°,\ a = 2,\ c = 3.6$