7.3A

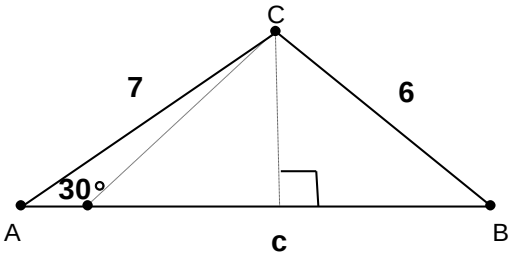
Date:

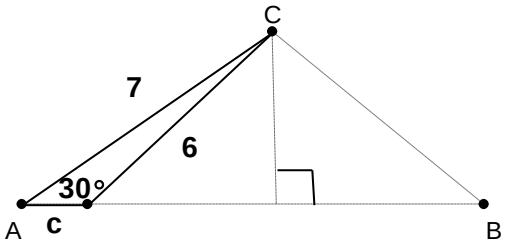
Objective:

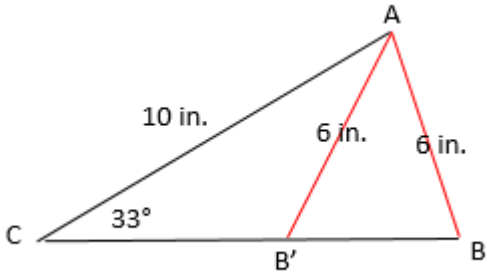
If the picture is not draw for an SSA triangle, you do not know how the triangle is put together.

SSA (The Ambiguous Case): If you know two sides and a non-included angle (an angle that is not between the sides), there may be zero, one, or two possible triangles that fit the given measurements.

Solve $\triangle ABC$ given that a = 6, b = 7, and $\angle A = 30°$ Two triangles are possible with the given information.







To determine if there is a 2nd valid angle:

1. See if you are given two sides and the angle not in between (SSA). This is the situation that may have 2 possible answers.
2. Find the value of the unknown angle.
3. No triangle:

One triangle:

Two triangles:

******When using law of sines, you must _____!!!!!!!!**

Examples: Solve each triangle. Round your answers to the nearest tenth. Hint: Draw the triangle and identify the type of triangle.

a) $\beta = 38^\circ,\ b = 2.9,\ c = 5.9$

$m\angle A =$ _____ $a =$ _____

$m\angle B =$ _____ b = _____

$m\angle C =$ _____ c = _____

b) $\beta = 38^\circ, b = 6.4,\ c = 5.9$

$m\angle A =$ _____ $a =$ _____

$m\angle B =$ _____ b = _____

$m\angle C =$ _____ c = _____

c) $m\angle C = 36^\circ, b = 19\text{ m}, c = 20\text{ m}$

$m\angle A =$ _____ $a =$ _____

$m\angle B =$ _____ b = _____

$m\angle C =$ _____ c = _____

d) $\beta = 38^\circ,\ b = 4.7, c = 5.9$

$m\angle A =$ _____ $a =$ _____

$m\angle B =$ _____ b = _____

$m\angle C =$ _____ c = _____