Name:_____ Hour: _____ Date: _____

NOTES: Section 13.5 – Apply the Law of Sines

Goals: #1 - I can solve a triangle using the Law of Sines (need to know at least one angle and the opposite side).

#2 - I can find the area of a triangle when given two sides and that included angle.

Homework: Lesson 13.5 Worksheet

Warm Up:

1. Evaluate the expression. Give your answer in both radians and degrees. NO CALCULATOR.
   a. $\sin^{-1}\frac{\sqrt{2}}{2}$ b. $\cos^{-1}-\frac{\sqrt{3}}{2}$ c. $\tan^{-1}\frac{\sqrt{3}}{3}$

2. Solve the equation $\tan\theta = -2.5;\ 90° < \theta < 180°$

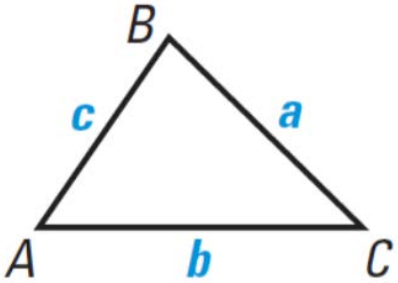
Notes:

How do we solve _____ with NO _____ angles?

- _____:

_____ = _____ = _____

_____ = _____ = _____



Name:_____ Hour: _____ Date: _____

This can be used to _____ triangles when _____ angles and the length of any _____ are known.

- _____:
- _____:
- _____:

Example #1: Solve ΔABC with $C = 107°, B = 25°$, and $b = 15$

Example #2: Solve ΔABC with $A = 115°, a = 20$, and $b = 11$

Name:_____ Hour: _____ Date: _____

You practice: Solve ΔABC with $A = 127°$, $a = 63$, and $b = 42$

Example #3: Solve ΔABC with $A = 51°$, $a = 3.5$, and $b = 5$

Example #4: Solve ΔABC with $A = 40°$, $a = 13$, and $b = 16$

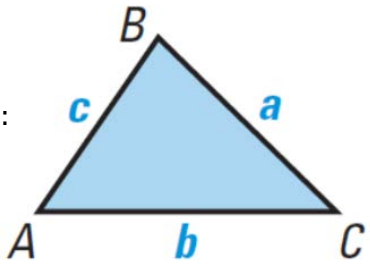
Name:_____ Hour: _____ Date: _____

You practice: Solve ΔABC with $B = 105°, b = 13$, and $a = 6$

Notes:

_____:

There are _____ ways we can _____ the area of ΔABC:



- Area =
- Area =
- Area =

Example #5: A piece of land is bordered by three roads as shown. Find the area of the land.