Investigating the Law Of Sines
Student Worksheet NAME_____

Page 1.3
Drag the triangle and explain what you notice about the ratios shown above.

Page 1.4
Write the 3 equal ratios from the previous page.

The first triangle shown above has 3 known quantities (AAS). Find side "a" using two of the ratios (a proportion) from the Law of Sines.

The second triangle shown above has 3 known quantities (ASA). Find side "a" using two of the ratios (a proportion) from the Law of Sines. This one will make you think a little more!

Page 1.5
What proportion would you use to find angle B?

Page 1.6
Sketch and label your result.

Page 1.7
When side a is _____ than the height and _____ than the other given side, one triangle is possible. Measure side a, then solve this entire triangle using the Law of Sines.

Page 1.8
Sketch your result.

Page 1.9
When side a is _____ to the height one triangle is possible. Show two ways that you could solve this triangle (right triangle trig or using the ratios from the Law of Sines). Use the measures provided and the one you measured for side a.

When side a is_____ than the height NO triangle is possible. Pick a value for side a that satisfies this condition. Try the Law of Sines to find one of the two missing angles. What happens?

Page 1.10
Sketch your results.

Page 1.11
When side a is _____ than the height and _____ than side b, two triangles are possible. Solve each triangle using the Law of Sines.

Page 1.12
If the given angle A is obtuse and side a is _____than side b, _____ triangle is possible.

Page 1.13
When side a is _____than side b, _____ triangle is possible. Solve it.

Page 1.14
When you use the Law of Sines, what are the important things to look for before you begin?

In the no solution case, what will happen as you solve the problem using the Law of Sines?

In the two solution case, what will happen as you solve the problem using the Law of Sines?

Page 1.15
Work out Exercises 1-3.