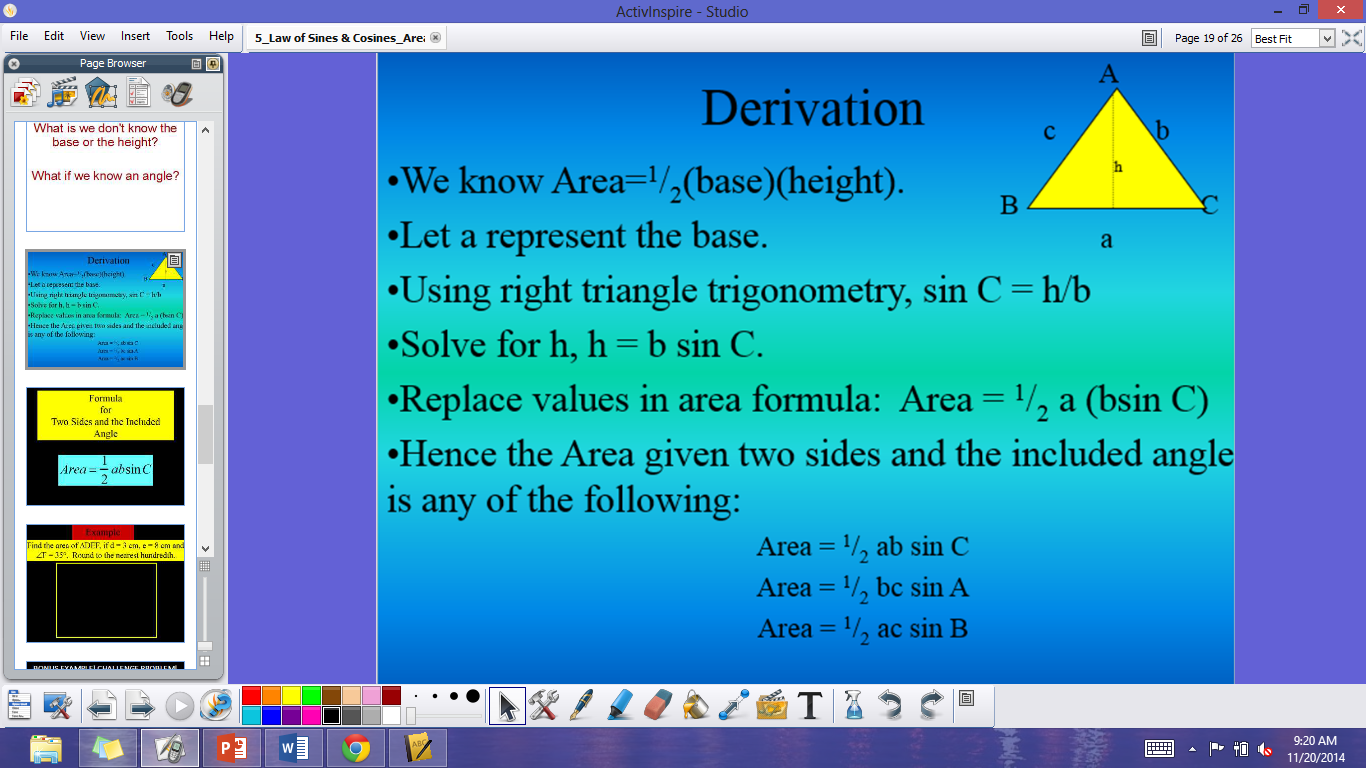
**Unit 6 #7 Area of a Triangle**

Normal area of a triangle formula: Area = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What if we don’t know the base or the height? What if we only know an angle instead?



We can use trig to come up with a new formula and values for the base and height!

**Let a = \_\_\_\_\_\_\_\_\_\_\_\_**

Let’s use ∠C. Use a trig ratio to solve for the height.

Solve for h! (*Literal Equations from Unit 2!)*

Replace the values in our normal area formula.

Area = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Example 1: Find the area of DEF, if d = 3cm, e = 8cm, and ∠F = 35o. Round to the nearest whole number.

Example 2: West Meck is finally getting a pool in the gym for the swim team! In order to cut down on costs, the pool is going to be triangular shaped instead of rectangular. Two of the sides of the pool are 80 yards and 150 yards. The angle between the two sides is 67o. What is the surface area of the pool going to be?

Practice Problems: Find the area of each triangle using the given information. Round only your final answer to the nearest whole number.

1. ABC, a = 3, b = 2, ∠C = 24o  2. CFV, c = 31, ∠F = 27o, v = 26