CECS 174 – Assignment 4

Math Libraries - Use the Math Class (http://docs.oracle.com/javase/6/docs/api/ -> Math) to help create your formulas for these two programs.

Write a program that will calculate different aspects of a right triangle given the lengths of the base and the height.

1. Prompt the user to input the base and the height.
2. Draw a generic right triangle using "/" and "|" and display the base, height and hypotenuse with one decimal point of precision on the matching sides. (Use the printf() function)(See below).
3. Calculate and display the following with 3 digit precision:
    a. Hypotenuse - $a^2 + b^2 = h^2$
    b. Angles of the triangle (in degrees) - $\sin\theta = \frac{a}{h}$ (sum of all angles = 180)
    c. Perimeter
    d. Area
4. Use the printf() function to ensure that your decimal points and "=" signs are aligned.

Example:

```
-- Triangle Calculator --
Please enter the Base and Height of the triangle: 3.0 4.0

          /|
         / |
        /  |
   5.0 /   | 4.0
      /    |
     /     |
    /______|
       3.0

 3.000 = Base
 4.000 = Height
 5.000 = Hypotenuse
53.130 = Angle A
36.870 = Angle B
90.000 = Angle C
 6.000 = Area
12.000 = Perimeter
```