**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **(name)**

**Internet of Things Activity 9: Analog to Digital Conversion**

**Individual Homework Activity: (15 points)**

Add either a common Cathode or common Anode RGB LED to your circuit.

Write a program that does the following:

* Prints the data from a light sensor and a TMP36 on screen.
* Turns the RGB LED green when you block light from hitting the light sensor.
* Turns the RGB LED blue when the temperature of the sensor decreases below 65°F.
* Turns the RGB LED red when the temperature of the sensor increases above 80°F.

Keep in mind that you are changing the lights when looking for temperature changes in degrees Fahrenheit. To make the sensor cold, you can put a metal spoon in the freezer, and when it is cold, touch the spoon to the sensor. To make the sensor hot, you can put a metal spoon in hot water to warm it up and touch the spoon to the sensor. Be careful to not get your circuit wet.

The following video is a demonstration of the program you are to write.

<https://youtu.be/fHlVBFfrBCk>

Submit your python program and paste the code to this sheet. Take a video of your circuit working showing successful completion of the homework. Upload this video to YouTube (you can make it private) and include the youtube link in your documentation lines. Your programs must include documentation lines that include your name, the date, and a line that states what the program is supposed to do.