Worksheet #3

You are a forensic scientist called to a murder scene.

When you arrive, you measure the temperature of the room to be 60 degrees, and the temperature of the corpse to be 62 degrees.

As a forensic scientist, you know from your math and science courses in college that a live human has a body temperature of 98.6 degrees, and that when a person dies, their body cools so that every hour the difference in temperature between the body and the room decreases by a factor of one half.

Figure out how long ago the murder was committed.

Hint: Use the graph below and follow these steps.

Step 1: Draw a horizontal line at 60 degrees. This represents the temperature of the room.

Step 2: Plot a point at time zero and 98.6 degrees. (It you wish to approximate, you can say 98.6 is pretty close to 100.) This is the temperature of the body at the moment of death.

Step 3: For each hour, plot a point for the body's temperature. Remember that each hour the difference between the body's temperature and the room's temperature decreases by half.

Step 4: Draw a curve connecting the points.

Step 5: At what approximately what time will the body have a temperature of 62 degrees? This is how long it has been since the murder.