Forward Until Dark Quiz

NAME ______________________________________ DATE ________________

1. One reasonable way of finding a threshold for a light sensor would be to:
   a. use the output value of the LED.
   b. sum up the high and low readings and then divide that by two.
   c. use the high reading and subtract the distance traveled.
   d. calculate the average of the ambient light in the room.

2. What type of light does the NXT light sensor use?
   a. Reflected halogen light
   b. LED
   c. Neon light
   d. Fluorescent light

3. A high number reading from the light sensor could mean:
   a. the light sensor is seeing a dark surface which reflects a small amount of light.
   b. the light sensor is seeing a dark surface which reflects no light.
   c. the light sensor is seeing a light surface which reflects a large amount of light.
   d. the light sensor was unable to detect either a light or dark surface and cannot make a consistent final reading.

4. A standard behavior to move until the robot sees a dark line on a light surface looks like the following code. Writing directly on the code, change the program above to look for a white line on a dark surface instead (assume the threshold value stays the same).

   ```c
   while(SensorValue(lightSensor) > 45)
   {
     motor[motorC] = 75;
     motor[motorB] = 75;
   }
   ```

5. What does it mean when the Light Sensor is in “Active Mode”?  
   a. It is actively generating its own light using the built-in emitter.
   b. The light sensor is actively controlling the motors.
   c. The light source is turned off, and the sensor is actively searching for outside light.
   d. The light sensor is broken, and you need to actively find a replacement.