Name: Date: Class:

Line Follower Challenge Pre-Quiz Answer Key

1. How does the light sensor work? Does the light sensor detect white or black as a higher amount of light reflectivity? What about absorbance?

   The color sensor sends out light from one side and uses a sensor next to it to detect the light that comes back after being reflected by the surface the light hits.

   White objects reflect most of the light, whereas dark objects reflect very little light. Thus, a higher reading of the color sensor means that more of the light is reflected.

   Looking at it another way, darker objects absorb more light, so less is available to be reflected. That is, more absorption means less reflectance.

2. Can you think of a method to have the robot follow the line using turns? Describe how it would work.

   The two main program commands used are:

   1. If the color sensor detects a whitish color, program the robot to turn in a certain direction.
   2. If the color sensor detects a darkish color, program the robot to turn in the opposite direction.

   With this technique, the robot can be made to follow the edge of a line.