

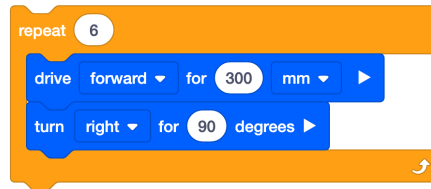
## Treasure Hunt: Lesson 3 – Check Your Understanding

### Learn Questions

1. Which of the following is NOT a function of the Optical Sensor?
  - a. Reporting the proximity of an object
  - b. Reporting the color of an object
  - c. Reporting whether the Bumper Switch is pressed
  - d. Reporting the brightness of ambient light
  
2. You can view the values the Optical Sensor is reporting as a project is running on the \_\_\_\_\_.
  - a. Dashboard on the VEX IQ (2nd gen) Brain
  - b. Touch LED
  - c. VEXcode IQ Toolbox
  - d. Help
  
3. Which of the following is a NOT possible use for the Optical Sensor?
  - a. To drive forward until a wall is detected
  - b. To make a decision based on the color of an object that is detected
  - c. To report the brightness value of ambient light
  - d. To repeat behaviors for a specified number of times
  
4. The [If then] block enables your robot to do which of the following:
  - a. Drive forward for a specific distance
  - b. Repeatedly check a condition
  - c. Turn left 180 degrees
  - d. Make a decision
  
5. If the Boolean condition is reported as \_\_\_\_\_ the blocks inside of the [If then] block will \_\_\_\_\_.
  - a. FALSE; run
  - b. TRUE; run
  - c. TRUE; be skipped
  - d. FALSE; be skipped
  - e. Both A and D
  
6. To make an [If then] block check a condition multiple times, which of the following blocks can be added?
  - a. [Drive for]

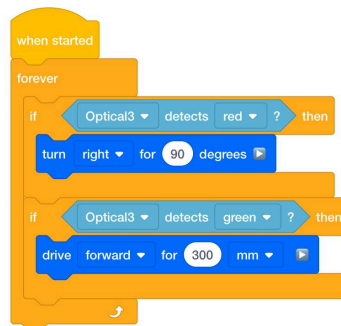
- b. [Forever]
- c. [Spin for]
- d. None, the [If then] block repeatedly checks conditions

7. How many times will the behaviors in this [Repeat] block be executed?



- a. 300
- b. 90
- c. 6
- d. 0

8. What condition will be checked next if the condition of the Optical Sensor detecting red is FALSE?



- a. The condition of the Bumper Switch being pressed.
- b. The condition of the Optical Sensor detecting green.
- c. The condition of the Optical Sensor detecting blue.
- d. The condition of the Touch LED being pressed.

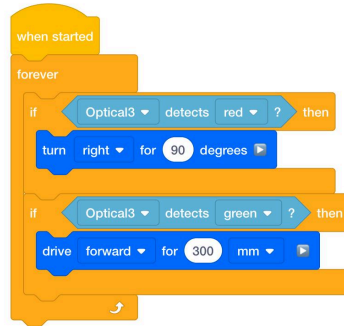
9. What is the purpose of having multiple [If then] blocks in this project?



- a. To have the Optical Sensor check for each color and show the color on the Touch LED.
- b. To have the robot drive forward when it detects red.

- c. To have the robot start a project when the Bumper Switch is pressed.
- d. To have the robot drive through a color disk maze.

10. In this project when the Optical Sensor detects \_\_\_\_\_ the robot will \_\_\_\_\_.



- a. Red; turn right 90 degrees
- b. Blue; drive in reverse 300mm
- c. Green; drive forward 300mm
- d. Red; drive forward 300mm
- e. Both A and C