


## Waits, Loops and Switches Worksheet **Answer Key**

1. Program the robot to perform the following (first, attach to your robot 2 touch sensors, name them A and B):
  - Stay at rest and display “Ready” on the screen.
  - Move left and display “Left” whenever touch sensor A is pressed.
  - Move right and display “Right” whenever touch sensor B is pressed.
  - Move forward and display “Forward” whenever both touch sensors A and B are pressed.
  - Stay at rest and display “Stop” when no buttons are pressed.

 Hint: Click on the  
from the drop-  
down



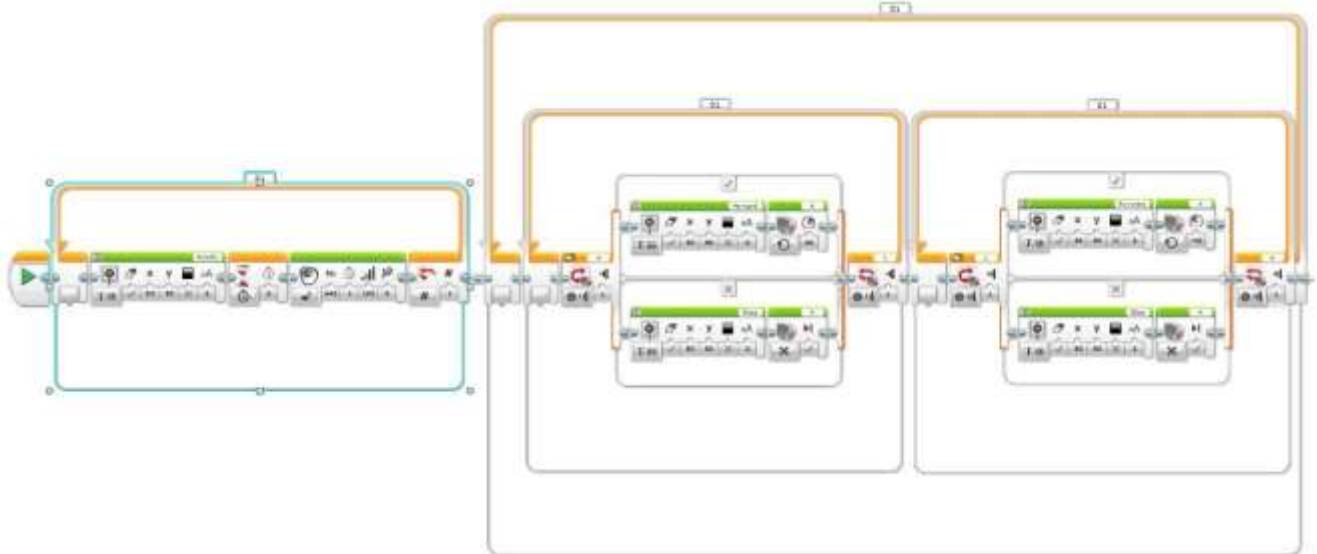
icon, drag the block into the program, and select “Text”  
menu to display text on screen.

2. Brainstorm about possible programming solutions and write below the one that your group thinks is the best one. Write in English the various steps that are necessary.

1. Display “Ready” on the screen
2. If touch sensor in port 4 is pressed
  1. Display “Forward” and move forward
3. Else if touch sensor in port 1 is pressed
  1. Display “Reverse” and go backwards
4. Else if touch sensor in port 1 and 4 is not pressed
  1. Display “Stop” and don’t move
5. Repeat Steps 2-4 forever

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

3. Draw the various EV3 blocks that will be needed in the program.



Then use the LEGO EV3 software to create your program, download and test it with the robot and sensors, revise and retest as necessary until it works as a successful solution.

4. Did you have to “iterate” (make changes to the program, etc.) to make it work? How many iterations did you have to perform? Explain.

Answers will vary. Example answer: No, we did not have to iterate; our program worked the first time through.