**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.

1. **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.**
2. **Display “Ready” on the screen**
3. **If touch sensor in port 4 is pressed**
	1. **Display “Forward” and move forward**
4. **Else if touch sensor in port 1 is pressed**
	1. **Display “Reverse” and go backwards**
5. **Else if touch sensor in port 1 and 4 is not pressed**
	1. **Display “Stop” and don’t move**
6. **Repeat Steps 2-4 forever**
7. **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.

1. **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.**