

# BUILD IT

## Answers to Figure 8 Challenge NXT Questions

Name: \_\_\_\_\_

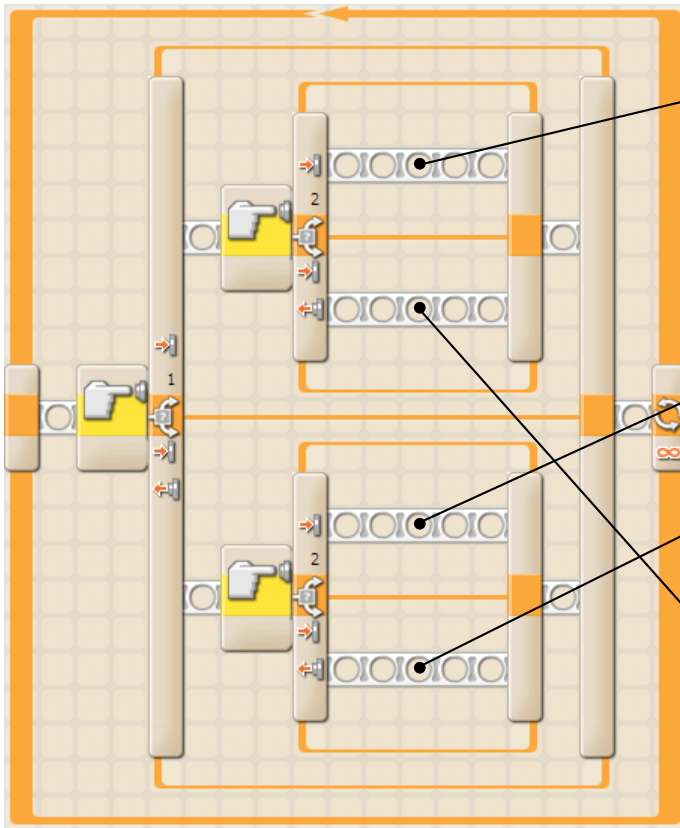
Date: \_\_\_\_\_

1. You are trying to make a program that works with two touch sensors. You want it to work so that:
  - when both touch sensors are held down, a picture is drawn on the NXT screen
  - when both touch sensors are let go, the NXT plays a sound
  - when touch sensor 1 is held down and 2 is not, a motor spins forward
  - when touch sensor 2 is held down and 1 is not, the motor stops

Shown below is the program so far along with a bunch of icons. Draw a line from each icon to the location in the program where it belongs, and if it doesn't belong in the program at all, cross it out with an "X". (Each switch with a touch sensor is testing for "pressed", not "released" or "bumped".)

Your program so far

2.



Icons



There is a bug somewhere in this program.

a. What is the problem?

*There is an empty infinite loop in one of the innermost branches. When the program reaches it, it will get stuck in the loop with no way out, and nothing more will happen.*

b. What has to happen to the touch sensors in order for the program to reach the bug? (Each switch with a touch sensor is testing for “pressed”, not “released” or “bumped”.)

- *Touch sensor 1: Released.*
- *Touch sensor 2: Pressed.*
- *Touch sensor 3: Released.*

