

Name:

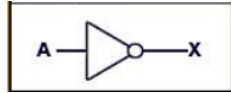
Date:

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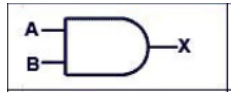
# Beyond Binary Quiz

**Instructions:** Fill in the blanks with the logic gate type that is represented in the image. Your choices are AND, NOT, or OR.

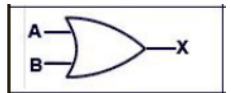
1. \_\_\_\_\_



2. \_\_\_\_\_



3. \_\_\_\_\_



4. \_\_\_\_\_

Input A	Input B	Output
0	0	0
1	0	1
0	1	1
1	1	1

5. \_\_\_\_\_

Input A	Input B	Output
0	0	0
1	0	0
0	1	0
1	1	1

6. \_\_\_\_\_

Input	Output
0	1
1	0

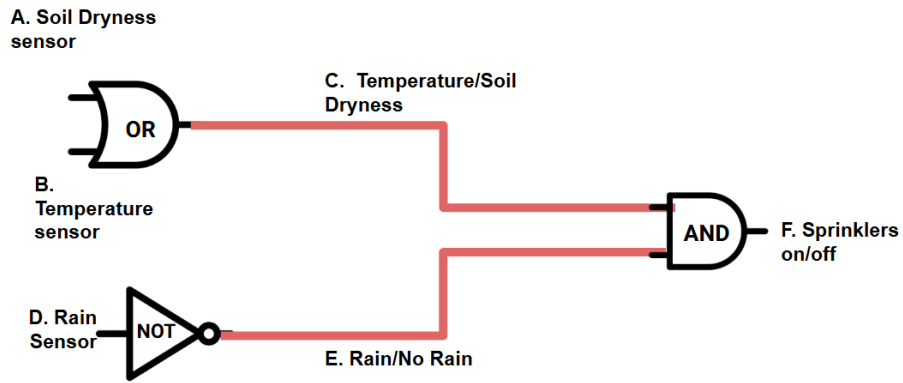
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7. The following is a set of logic gates that create a smart control for a sprinkler system. Create a set of truth tables for **each gate** using words (not 1s and 0s), and then write a statement that explains all of the conditions that must be true for the sprinkler system to automatically turn on.

### Lawn Sprinkler System-Integration Diagram



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8. **Choose one** of the two scenarios below. Sketch the logic gate integrated circuit described by the scenario. Then create truth tables using words, not 1s and 0s, to describe how each gate functions and integrates with the others to complete the task.

**Elevator Control:**

An elevator moves up when either the up button is pressed inside the elevator or the up button is pressed outside the elevator, but not when the emergency stop button has been pressed.

**Secure Building Access:**

A user can gain access when both the correct username and password are entered or a valid biometric scan occurs, but not if the building is on lockdown.