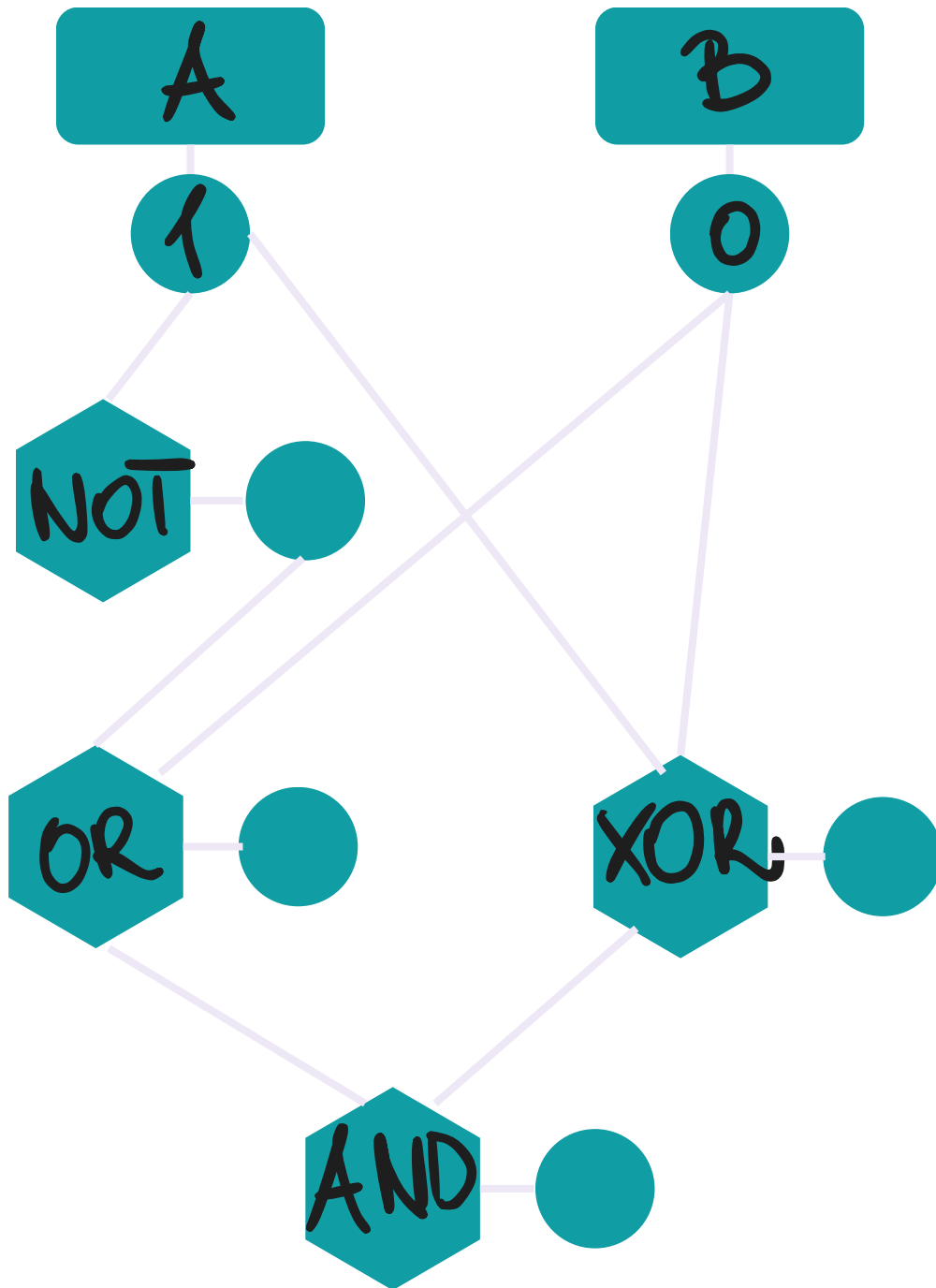# CRACK THE CODE #2

A

1

B

0

NOT

OR

XOR

AND

Instructions: Your goal is to discover the final output. Follow the path of signals A and B through the logic gates. Keep these rules in mind:

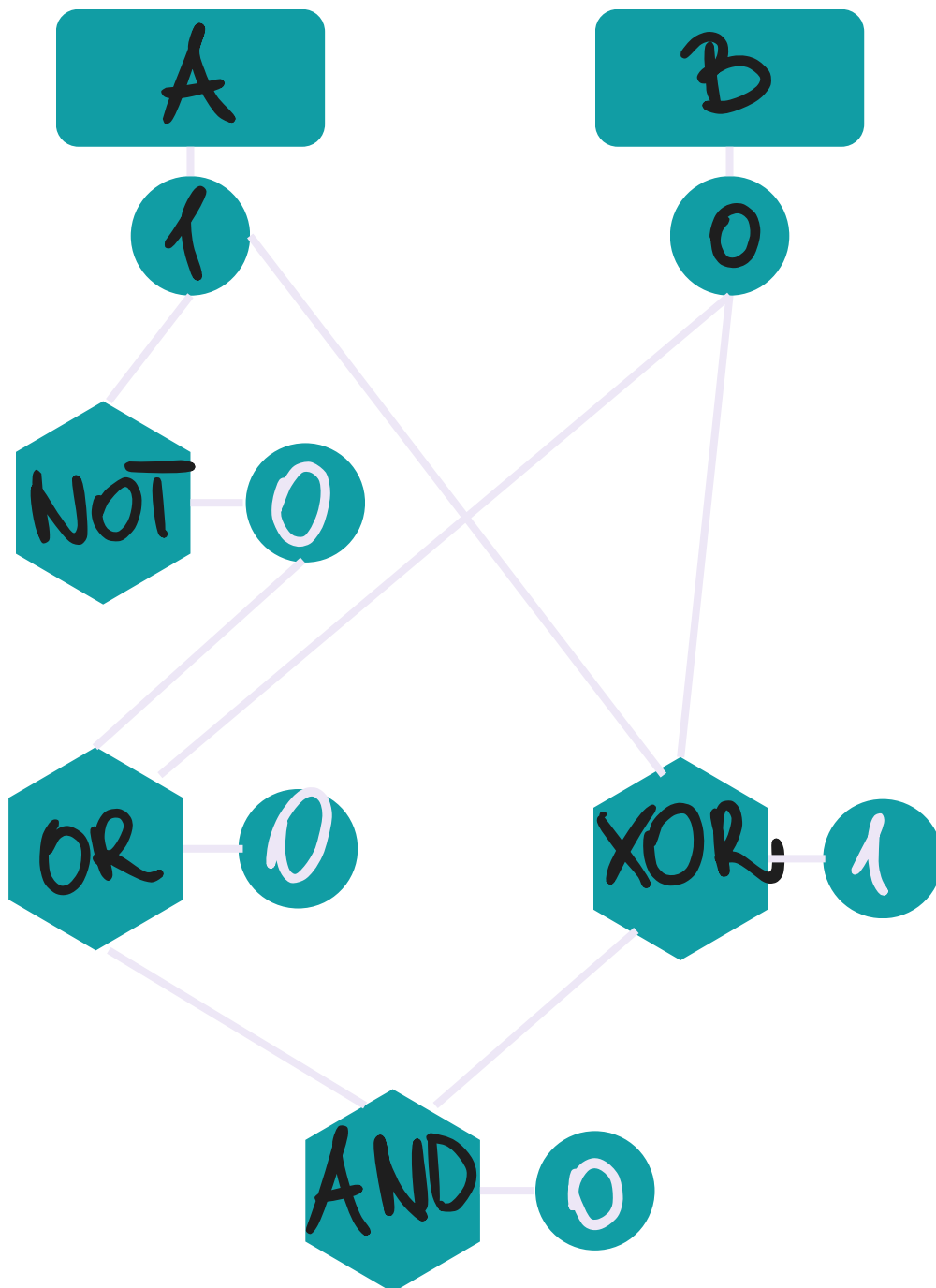NOT: Inverts the signal (turns 1 into 0, and 0 into 1).

OR: Output is 1 if at least one input is 1.

XOR: Output is 1 only if the inputs are different (e.g., 1 and 0).

AND: Output is 1 only if both inputs are 1.

Quick Tip: Write the intermediate results in the small circles next to each gate so you don't get lost!

THE SOLUTION

A

1

B

0

NOT 0

OR 0

XOR 1

AND 0

Logic Path:
NOT: Input signal A (1) changes to 0.
OR: Receives 0 (from the NOT gate) and 0 (directly from signal B). Result = 0.
XOR: Receives the original signals A (1) and B (0). Since they are different, the result = 1.
AND (Final): Receives the results from the previous gates: 0 and 1. For an AND gate, this is not enough to produce a 1.
FINAL OUTPUT: 0