CAIE Computer Science IGCSE
10 Boolean logic

Flashcards

What is Boolean logic?

What is Boolean logic?

A logic system where values are either TRUE (1) or FALSE (0).

What name is given to a collection of connected logic gates?

What name is given to a collection of connected logic gates?

A logic circuit.

How many outputs do logic gates have?

How many outputs to logic gates have?

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What is a truth table used for?

What is a truth table used for?

To show all possible input combinations and their corresponding outputs for a logic expression.

Name, and draw the symbol for, the type of logic gate that only accepts one input.

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NOT —▷o—

What does the NOT operator do?

What does the NOT operator do?

Reverses the input: TRUE becomes FALSE, and FALSE becomes TRUE.

What is the truth table for NOT?

What is the truth table for NOT?

A	NOT A
0	1
1	0

Which logic gate is represented by this symbol?

Which logic gate is represented by this symbol?

NAND

Which logic gate does this truth table represent?

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

Which logic gate does this truth table represent?

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

OR

Which logic gate is represented by this symbol?

Which logic gate is represented by this symbol?
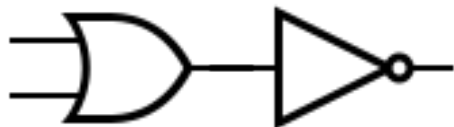
OR

Which two logic gates can be combined to form this logic gate?

Which two logic gates can be combined to form this logic gate?

NOT and OR

Which logic gate is represented by this symbol?

Which logic gate is represented by this symbol?

NOR

Which logic gate only outputs FALSE when both inputs are FALSE?

Which logic gate only outputs FALSE when both inputs are FALSE?

OR

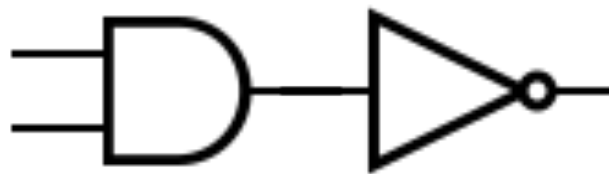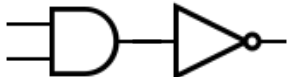Which logic gate outputs TRUE when exactly one input is TRUE?

Which logic gate outputs TRUE when exactly one input is TRUE?

XOR

Which logic gate is the equivalent of this logic circuit?

Which logic gate is the equivalent of this logic circuit? ⟯D⟯▷○–

NAND

What is the output of: A = 1,
B = 0 → A AND B?

What is the output of: A = 1, B = 0 → A AND B?

0

What is the output of: A = 1, B = 0 → A OR B?

What is the output of: A = 1, B = 0 → A OR B?

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