

CIE Physics GCSE

Topic 4.4 - Digital Electronics

(supplement)

Flashcards

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What is an analogue signal? (supplement)



What is an analogue signal? (supplement)

A signal in which frequency, amplitude or both varies continuously.



What is a digital signal? (supplement)



What is a digital signal? (supplement)

A signal varying between two states only:
high/on and low/off.



Give advantages of digital signals
(supplement)



Give advantages of digital signals (supplement)

- Carry more information per second
- Maintain their quality over long distances
- Noise resistant



What is noise? (supplement)



What is noise? (supplement)

Random variations which disrupt a signal.



Why is noise a problem for analogue signals? (supplement)



Why is noise a problem for analogue signals?
(supplement)

Noise is amplified when the signal is amplified, so the signal quality is reduced.



Describe the NOT gate (supplement)



Describe the NOT gate (supplement).

If the input is one state, the output will be the opposite.



Describe the AND gate (supplement).



Describe the AND gate (supplement)

If both inputs are high then the output will be high.

Otherwise, the output will be low.



Describe the OR gate (supplement)



Describe the OR gate (supplement)

If either of the inputs is high, the output will be high.

Otherwise, the output will be low.



Describe the NAND gate (supplement)



Describe the NAND gate (supplement)

If both inputs are high, the output will be low.

Otherwise the output will be high.



Describe the NOR gate (supplement)



Describe the NOR gate (supplement)

If either of the inputs is high, the output will be low.

Otherwise, the output will be high.



What is a truth table? (supplement)



What is a truth table? (supplement)

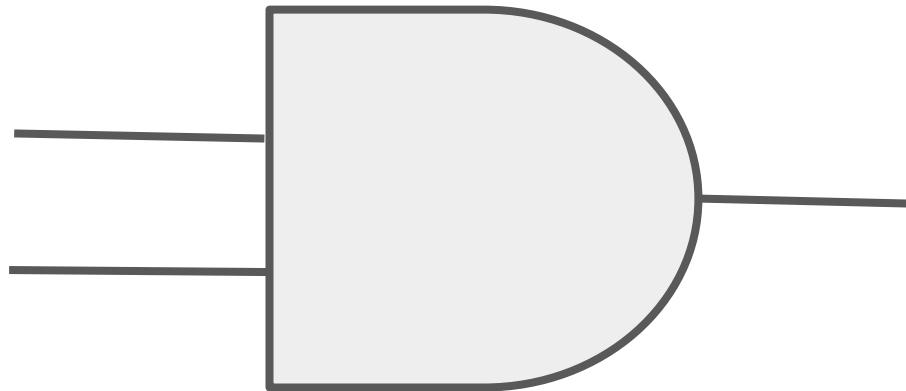
A diagram showing the corresponding output of all possible inputs into a logic gate.



What is the symbol for the AND gate?
(supplement)



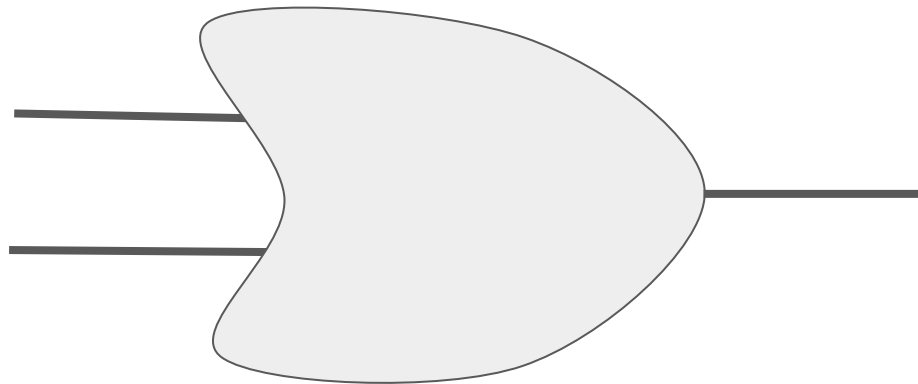
What is the symbol for the AND gate? (supplement)



What is the symbol for the OR gate?
(supplement)



What is the symbol for the OR gate? (supplement)



What is the symbol for the NAND gate?
(supplement)



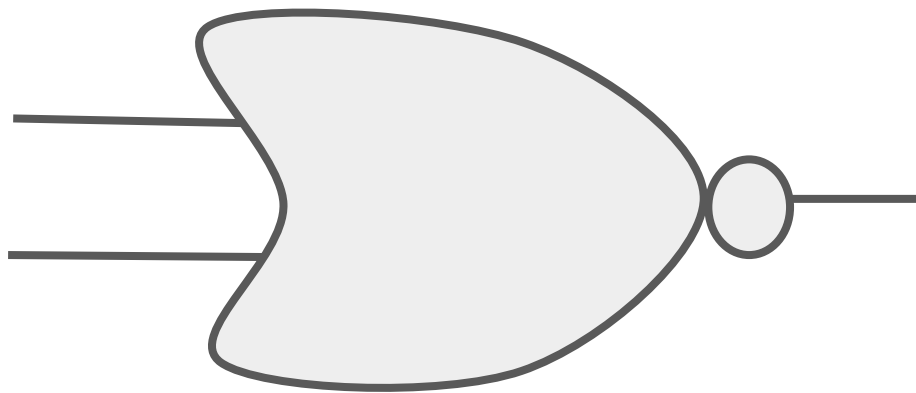
What is the symbol for the NAND gate?
(supplement)



What is the symbol for the NOR gate?
(supplement)



What is the symbol for the NOR gate? (supplement)



What is the symbol for the NOT gate?
(supplement)



What is the symbol for the NOT gate? (supplement)

