

Topic 10: Boolean Logic

EAL keyword sheet - Cambridge IGCSE Computer Science 0984. Write the word in your own language in the last column.

Keyword	Meaning	Example sentence	In my language
Boolean logic	A system where every value is either true (1) or false (0).	<i>Boolean logic is used inside computers.</i>	
logic gate	An electronic part that takes one or more inputs and gives one output (0 or 1).	<i>An AND gate is a logic gate.</i>	
input	A value that goes into a logic gate.	<i>The AND gate has two inputs.</i>	
output	The result that comes out of a logic gate.	<i>The output is 1.</i>	
NOT gate	Reverses the input: 1 becomes 0, 0 becomes 1.	<i>The output of a NOT gate is the opposite of the input.</i>	
AND gate	Gives 1 only if both inputs are 1.	<i>1 AND 1 gives 1.</i>	
OR gate	Gives 1 if at least one input is 1.	<i>1 OR 0 gives 1.</i>	
NAND gate	The opposite of AND. It gives 0 only if both inputs are 1.	<i>NAND means NOT AND.</i>	
NOR gate	The opposite of OR. It gives 1 only if both inputs are 0.	<i>NOR means NOT OR.</i>	
XOR gate	Gives 1 if the inputs are different.	<i>1 XOR 0 gives 1 but 1 XOR 1 gives 0.</i>	
truth table	A table that shows the output for every possible combination of inputs.	<i>A truth table with 2 inputs has 4 rows.</i>	
logic circuit	A diagram with several logic gates joined together.	<i>I drew a logic circuit for the alarm.</i>	
Boolean expression	A way of writing logic using words such as AND, OR and NOT.	<i>The Boolean expression is (A AND B) OR C.</i>	
combination	One possible set of input values.	<i>There are four combinations of two inputs.</i>	
true / false	The two Boolean values. True is 1 and false is 0.	<i>The output is true.</i>	
problem statement	A description of a situation in words that you change into a logic circuit.	<i>Read the problem statement carefully.</i>	