Truth Tables

Truth tables are used to work out the **output** from a set of **Boolean logic** statements

A	B	A AND B

A and B are the inputs

The last column is the output

Truth Tables

if it is dark and there is movement

- A is a light sensor
- B is a movement sensor

A	B	A AND B

Truth Tables

1 = True
0 = False

if it is dark and there is movement

- A is a light sensor
- B is a movement sensor

A	B	A AND B
0	0	
0	1	
1	0	
1	1	

Truth Tables

1 = True
0 = False

if it is dark and there is movement

- A is a light sensor
- B is a movement sensor

A	B	A AND B
0	0	It's light; there's no movement
0	1	It's light; there is movement
1	0	It's dark; there's no movement
1	1	It's dark; there is movement

Truth Tables

1 = True
0 = False

if it is dark and there is movement

- A is a light sensor
- B is a movement sensor

A	B	A AND B
0	0	It's light; there's no movement = no light
0	1	It's light; there is movement = no light
1	0	It's dark; there's no movement = no light
1	1	It's dark; there is movement = **light on**

Truth Tables

1 = True
0 = False

if it is dark and there is movement

- A is a light sensor
- B is a movement sensor

A	B	A AND B
0	0	0
0	1	0
1	0	0
1	1	1

Truth Tables

1 = True
0 = False

Each of the four logic gates has its own Truth Table that you need to know

- AND
- OR
- XOR
- NOT

Truth tables can be much more complex than this and have up to 3 inputs