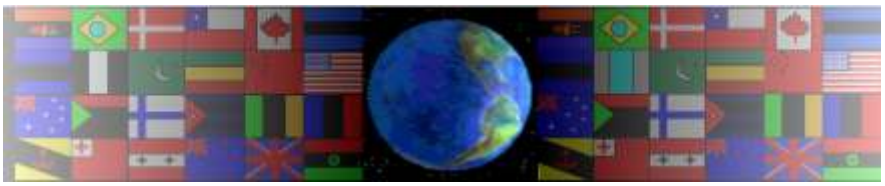
DIGITAL LOGIC CIRCUITS

On behalf of The World Association of Technology Teachers

W.A.T.T.



World Association of Technology Teachers

This exercise can be printed and used by teachers and students. It is recommended that you view the website (www.technologystudent.com) before attempting the design sheet .

DIGITAL LOGIC TABLES AND GATES

PLEASE NOTE:

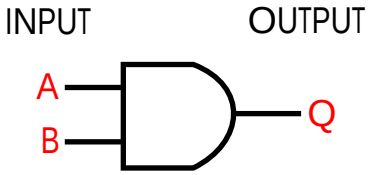
A '1' means that current is present. For instance, if current is present at an output of a gate then this is represented as a '1'. Instead of placing a '1' at the output other terms can be applied - high, true, on or up - all mean that current is present.

A '0' means that current is not present. For instance, if current is not present at an output of a gate then this is represented as a '0'. Instead of placing a'0' at the output other terms can be applied - low, false, off or low - all mean that current is not present.

Alternative ways of representing the AND gate are written below. Complete each of the truth tables.

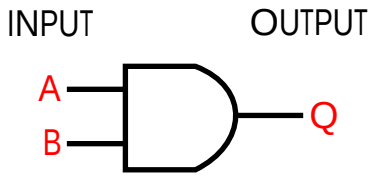
AND gate

A	B	Q
LOW		LOW
LOW	HIGH	LOW
HIGH	LOW	
	HIGH	HIGH



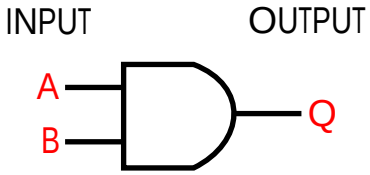
AND gate

A	B	Q
OFF		OFF
OFF	ON	OFF
ON	OFF	
	ON	ON



AND gate

A	B	Q
FALSE		FALSE
FALSE	TRUE	FALSE
TRUE	FALSE	
	TRUE	TRUE



QUESTION:
Complete the AND truth table below using 1s and 0s.

AND gate

A	B	Q