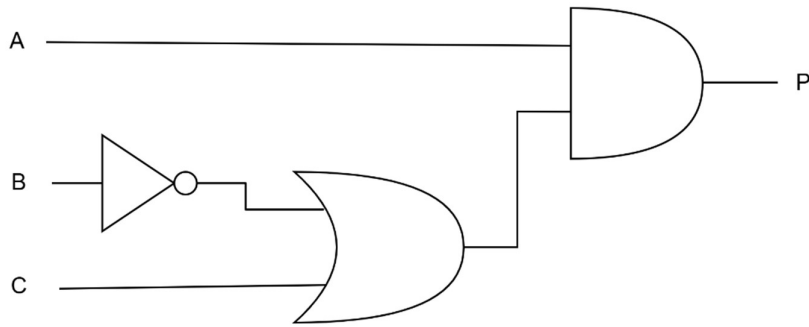




Although not presented in recent GCSE exam papers, logic notation is a quicker way of writing logic equations. However, it is referenced in A-level logic theory, so it is worth knowing.

Gate	Notation
AND	$\wedge$
OR	$\vee$
NOT	$\neg$

The Logic diagram below can be expressed as $Q = A \wedge (\neg B \vee C)$



1. Create a truth table for the logic gate above.

A	B	C		Q

2. AS mentioned above, the above logic diagram can be expressed as $Q = A \wedge (\neg B \vee C)$
Write the logic equation for the logic gate above using gates and not notation.

A garage door (Q) opens when a button is pressed (A) but only if the safety sensor detects no obstacle (B) and the door is currently closed (NOT C). This logic ensures the door doesn't open if something is blocking it. DELETE $Q = A \text{ AND } B \text{ AND } (\text{NOT } C)$

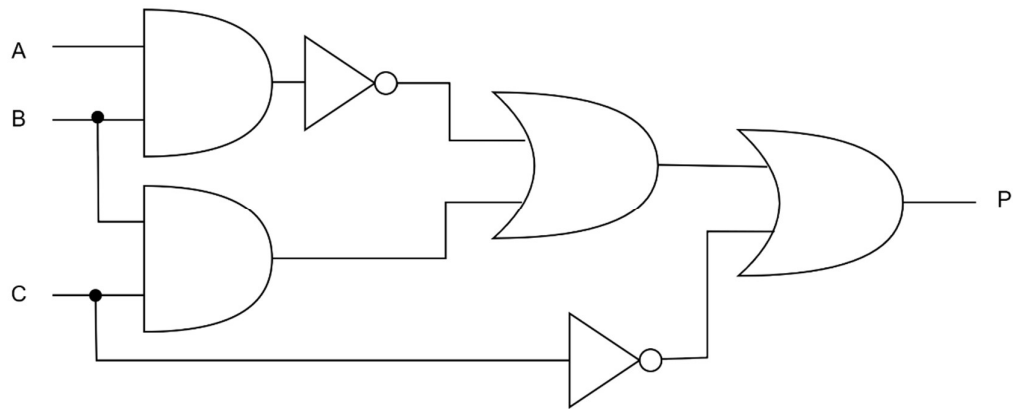
3. Draw the logic diagram for such a problem.

4. Create the truth table for the logic gate above. (use as many columns and rows as required)

5. Write the logic equation for the logic gate above

6. Write the logic equation for the logic gate above using logic notation





7. Complete the following truth table.

A	B	C	P

8. Write the logic equation for the logic gate above

9. Write the logic equation for the logic gate above using logic notation

