

On the Subject of Boolean Venn Diagrams

Why is there a big Venn diagram? Why are there some weird symbols? Oh no...

- This module has eight buttons, one for each enclosed section of the Venn diagram and one representing the area not enclosed in any section of the diagram.
- The three circles are referred to as "A" (top), "B" (bottom left), and "C" (bottom right).
- Above the circles a boolean logic expression is displayed. The operators used in the expression are:  
AND ( $\wedge$ ), OR ( $\vee$ ), XOR ( $\underline{\vee}$ ), IMPLIES ( $\rightarrow$ ), NAND ( $\mid$ ), NOR ( $\downarrow$ ), XNOR ( $\leftrightarrow$ ) and IMPLIED BY ( $\leftarrow$ ).
- Use the boolean logic expression to determine the correct solution given in the table below or in the one on the next page.
- Press all buttons that are marked green in the solution. If the background is green, then the small circular button in the top right on the module must be pressed.
- If an incorrect button is pressed, a strike will be recorded and the section will turn red.

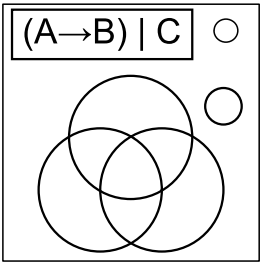


Table 1: (A \* B) \* C formulas

	(A $\wedge$ B)	(A $\vee$ B)	(A $\underline{\vee}$ B)	(A $\rightarrow$ B)	(A $\mid$ B)	(A $\downarrow$ B)	(A $\leftrightarrow$ B)	(A $\leftarrow$ B)
$\wedge$ C								
$\vee$ C								
$\underline{\vee}$ C								
$\rightarrow$ C								
$\mid$ C								
$\downarrow$ C								
$\leftrightarrow$ C								
$\leftarrow$ C								

B

#  
A

**Table 2: A \* (B \* C) formulas**

B

	$A \wedge$	$A \vee$	$A \underline{\vee}$	$A \rightarrow$	$A \mid$	$A \downarrow$	$A \leftrightarrow$	$A \leftarrow$
$(B \wedge C)$								
$(B \vee C)$								
$(B \underline{\vee} C)$								
$(B \rightarrow C)$								
$(B \mid C)$								
$(B \downarrow C)$								
$(B \leftrightarrow C)$								
$(B \leftarrow C)$								