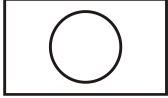

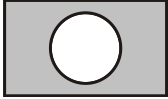
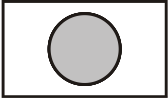
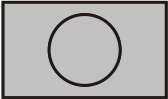
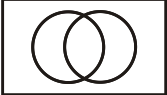

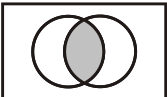
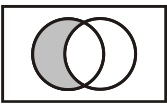
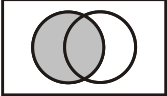
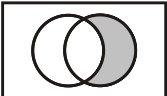
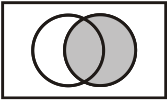
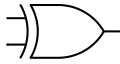
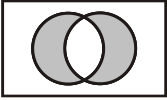

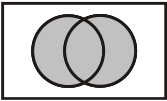
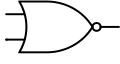
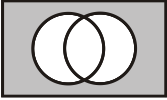

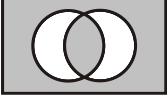
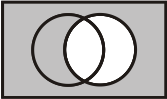


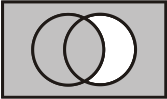
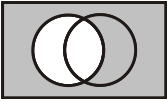
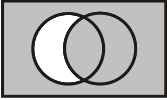
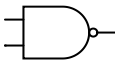
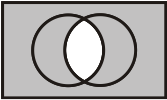
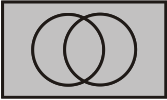
## Unary Logical Connectives

Truth Table	Name	Propositional Logic	Boolean Algebra	Circuit Gates	Set Theory	Venn Diagram						
<table border="1" style="display: inline-table;"> <tr><td>p</td><td>⊥</td></tr> <tr><td>F</td><td>F</td></tr> <tr><td>T</td><td>F</td></tr> </table>	p	⊥	F	F	T	F	Contradiction	⊥	0	0	∅	
p	⊥											
F	F											
T	F											
<table border="1" style="display: inline-table;"> <tr><td>p</td><td>¬p</td></tr> <tr><td>F</td><td>T</td></tr> <tr><td>T</td><td>F</td></tr> </table>	p	¬p	F	T	T	F	Negation Complement NOT	¬p	$\bar{p}$		$\bar{p}$	
p	¬p											
F	T											
T	F											
<table border="1" style="display: inline-table;"> <tr><td>p</td><td>p</td></tr> <tr><td>F</td><td>F</td></tr> <tr><td>T</td><td>T</td></tr> </table>	p	p	F	F	T	T	Identity	p	p	—	p	
p	p											
F	F											
T	T											
<table border="1" style="display: inline-table;"> <tr><td>p</td><td>⊤</td></tr> <tr><td>F</td><td>T</td></tr> <tr><td>T</td><td>T</td></tr> </table>	p	⊤	F	T	T	T	Tautology	⊤	1	1	U	
p	⊤											
F	T											
T	T											

## Binary Logical Connectives

Truth Table	Name	Propositional Logic	Boolean Algebra	Circuit Gates	Set Theory	Venn Diagram															
<table border="1" style="border-collapse: collapse; width: 60px; height: 60px;"> <tr><td>p</td><td>q</td><td>⊥</td></tr> <tr><td>F</td><td>F</td><td>F</td></tr> <tr><td>F</td><td>T</td><td>F</td></tr> <tr><td>T</td><td>F</td><td>F</td></tr> <tr><td>T</td><td>T</td><td>F</td></tr> </table>	p	q	⊥	F	F	F	F	T	F	T	F	F	T	T	F	Contradiction	⊥	0	0	∅	
p	q	⊥																			
F	F	F																			
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p	q	p∧q																			
F	F	F																			
F	T	F																			
T	F	F																			
T	T	T																			
<table border="1" style="border-collapse: collapse; width: 60px; height: 60px;"> <tr><td>p</td><td>q</td><td>p↗q</td></tr> <tr><td>F</td><td>F</td><td>F</td></tr> <tr><td>F</td><td>T</td><td>F</td></tr> <tr><td>T</td><td>F</td><td>T</td></tr> <tr><td>T</td><td>T</td><td>F</td></tr> </table>	p	q	p↗q	F	F	F	F	T	F	T	F	T	T	T	F	Material Nonimplication Set Difference Relative Complement	p↗q			p−q p \ q	
p	q	p↗q																			
F	F	F																			
F	T	F																			
T	F	T																			
T	T	F																			
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p	q	p																			
F	F	F																			
F	T	F																			
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p	q	p↖q																			
F	F	F																			
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<table border="1"> <thead> <tr><th>p</th><th>q</th><th>q</th></tr> </thead> <tbody> <tr><td>F</td><td>F</td><td>F</td></tr> <tr><td>F</td><td>T</td><td>T</td></tr> <tr><td>T</td><td>F</td><td>F</td></tr> <tr><td>T</td><td>T</td><td>T</td></tr> </tbody> </table>	p	q	q	F	F	F	F	T	T	T	F	F	T	T	T	Proposition q  Expression q  Set q	q	q		q	
p	q	q																			
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p	q	$p \leftrightarrow q$																			
F	F	F																			
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p	q	$p \vee q$																			
F	F	F																			
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T	F	T																			
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p	q	$p \downarrow q$																			
F	F	T																			
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p	q	$p \leftrightarrow q$																			
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p	q	$\neg q$																			
F	F	T																			
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p	q	$p \leftarrow q$																			
F	F	T																			
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p	q	$p \rightarrow q$																			
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p	q	T																			
F	F	T																			
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