Rules of Boolean Algebra

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| General Rules  |  |
| 1 | X ∧ 0 = 0  |
| 2 | X ∧ 1 = X |
| 3 | X ∧ X = X |
| 4 | X ∧¬ X = 0 |
| 5 | X ∨ 0 = X |
| 6 | X ∨ 1 = 1 |
| 7 | X ∨ X = X |
| 8 | X ∨ ¬ X = 1 |

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| Commutative Rules  |
| 9 | X ∧ Y = Y ∧ X |
| 10 | X ∨ Y = Y ∨ X |

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| Associative Rules  |
| 11 | X ∧ (Y ∧ Z) = (X ∧ Y) ∧ Z |
| 12 | X ∨ (Y ∨ Z) = (X ∨ Y) ∨ Z |

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| Distributive Rules  |
| 13 | X ∧ (Y ∨ Z) = (X ∧ Y) ∨ (X ∧ Z) |
| 14 | (X∨Y) ∧ (W∨Z) = (X∧W) ∨ (X∧Z) ∨ (Y∧W)∨(Y∧Z) |

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| Absorption Rules  |
| 15 | X ∨ (X ∧ Y) = X |
| 16 | X ∧ (X ∨ Y) = X |

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| Double Negation  |
| 17 | X = ¬ ¬ X |