Boolean Rules

Associative Rules:

```
(p && q) && r = p && (q && r)
(p || q) || r = p || (q || r)
```

Distributive Rules:

```
p && (q || r) = (p && q) || (p && r)
p || (q && r) = (p || q) && (p || r)
```

Idempotent Rules:

```
p && p = p
p || p = p
```

Double Negation:

```
!!p = p
```

DeMorgan's Rules:

```
!(p && q) = !p || !q
!(p || q) = !p && !q
```

Commutative Rules:

```
p && q = q && p
p || q = q || p
```

Absorption Rules:

```
p || (p && q) = p
p && (p || q) = p
```

Bound Rules:

```
p && 0 = 0
p && 1 = p
p || 1 = 1
p || 0 = p
```

Negation Rules:

```
p && (!p) = 0
p || (!p) = 1
```