```
== De Morgan's First Law ==
| p | q | -p | -q | p * q | -p * q | (-p) + (-q) | (-p * q) = ((-p) + (-q)) |
| F | F |  T |  T |   F   |    T   |      T      |             T            |
| F | T |  T |  F |   F   |    T   |      T      |             T            |
| T | F |  F |  T |   F   |    T   |      T      |             T            |
| T | T |  F |  F |   T   |    F   |      F      |             T            |

== De Morgan's Second Law ==
| p | q | -p | -q | p + q | -p + q | (-p) * (-q) | (-p + q) = ((-p) * (-q)) |
| F | F |  T |  T |   F   |    T   |      T      |             T            |
| F | T |  T |  F |   T   |    F   |      F      |             T            |
| T | F |  F |  T |   T   |    F   |      F      |             T            |
| T | T |  F |  F |   T   |    F   |      F      |             T            |

== First Associative Law ==
| p | q | r | p * q | q * r | (p * q) * r | p * (q * r) | ((p * q) * r) = (p * (q * r)) |
| F | F | F |   F   |   F   |      F      |      F      |               T               |
| F | F | T |   F   |   F   |      F      |      F      |               T               |
| F | T | F |   F   |   F   |      F      |      F      |               T               |
| F | T | T |   F   |   T   |      F      |      F      |               T               |
| T | F | F |   F   |   F   |      F      |      F      |               T               |
| T | F | T |   F   |   F   |      F      |      F      |               T               |
| T | T | F |   T   |   F   |      F      |      F      |               T               |
| T | T | T |   T   |   T   |      T      |      T      |               T               |
```

```
== Second Associative Law ==
| p | q | r | p + q | q + r | (p + q) + r | p + (q + r) | ((p + q) + r) = (p + (q + r)) |
| F | F | F |   F   |   F   |      F      |      F      |               T               |
| F | F | T |   F   |   T   |      T      |      T      |               T               |
| F | T | F |   T   |   T   |      T      |      T      |               T               |
| F | T | T |   T   |   T   |      T      |      T      |               T               |
| T | F | F |   T   |   F   |      T      |      T      |               T               |
| T | F | T |   T   |   T   |      T      |      T      |               T               |
| T | T | F |   T   |   T   |      T      |      T      |               T               |
| T | T | T |   T   |   T   |      T      |      T      |               T               |

== [(p + q) * (p -> r) * (q -> r)] -> r = T ==
| p | q | r | p + q | p -> r | q -> r | (p + q) * (p -> r) * (q -> r) | ((p + q) * (p -> r) * (q -> r)) -> r |
| F | F | F |   F   |    T   |    T   |               F               |                  T                   |
| F | F | T |   F   |    T   |    T   |               F               |                  T                   |
| F | T | F |   T   |    T   |    F   |               F               |                  T                   |
| F | T | T |   T   |    T   |    T   |               T               |                  T                   |
| T | F | F |   T   |    F   |    T   |               F               |                  T                   |
| T | F | T |   T   |    T   |    T   |               T               |                  T                   |
| T | T | F |   T   |    F   |    F   |               F               |                  T                   |
| T | T | T |   T   |    T   |    T   |               T               |                  T                   |

== p <-> q = (p -> q) * (q -> p) ==
| p | q | p <-> q | p -> q | q -> p | (p -> q) * (q -> p) | (p <-> q) = ((p -> q) * (q -> p)) |
| F | F |    T    |    T   |    T   |          T          |                 T                 |
| F | T |    F    |    T   |    F   |          F          |                 T                 |
| T | F |    F    |    F   |    T   |          F          |                 T                 |
| T | T |    T    |    T   |    T   |          T          |                 T                 |
```