

For ten points extra credit, please complete the following truth tables.

1. R Q $R \rightarrow Q$ R $\therefore Q$

Circle one: Valid Invalid

2. R Q $R \rightarrow Q$ $\sim Q$ $\therefore \sim R$

Circle one: Valid Invalid

3. P S $P \rightarrow S$ $S \rightarrow P$ $\therefore (P \rightarrow S) \vee (S \rightarrow P)$

Circle one: Valid Invalid

Convert the following into symbolic form and create a truth table for the problem and determine if the problem is valid or invalid based on the truth table.

4. If the cake gets hot, the icing melts, and if the icing melts, the cake cannot be used at the party. (C - cake; M - melts; P - party).

5. Sam will earn an A in class if and only if he studies and gets lots of sleep. Sam does not study. Therefore, Sam does not earn an A in class. (C - will earn an A in class; S - studies; L - lots of sleep).