

Name: _____

Truth Tables Review Worksheet

For each argument below, prove if its valid or invalid using truth tables.

1. $A \vee (B \cdot C)$

$B \supset A$ $/ A \cdot B$

2. $Q \vee (P \supset Q)$

$R \cdot Q$

P $/ Q \supset P$

3. $P \equiv Q$

$R \vee (Q \cdot P)$ $/ R \cdot P$

4. $Q \cdot R$

$R \vee S$

$Q \supset S$ $/ S$

5. $[P \vee (Q \cdot R)] \supset S$

$S \vee (Q \cdot P)$

$S \cdot R$ $/ R \supset S$

$$\begin{array}{l}
 6. (R \vee \sim S) \supset \sim(P \cdot Q) \\
 \quad \sim S \vee \sim Q \quad \quad / \sim R \supset P
 \end{array}$$

$$\begin{array}{l}
 7. \sim(\sim S \vee Q) \cdot (P \vee R) \\
 \quad \sim Q \cdot \sim R \\
 \quad \sim P \quad \quad / \sim S
 \end{array}$$

$$\begin{array}{l}
 8. P \supset (Q \vee \sim R) \\
 \quad Q \supset \sim R \quad \quad / P \supset \sim R
 \end{array}$$

$$\begin{array}{l}
 9. A \supset B \\
 \quad A \supset C \\
 \quad B \vee \sim C \quad \quad / \sim A
 \end{array}$$

$$\begin{array}{l}
 10. P \supset Q \\
 \quad \sim R \supset (P \vee S) \\
 \quad S \vee \sim Q \quad \quad / R \vee S
 \end{array}$$