

TRUTH TABLE PRACTICE

Create a truth table for each statement.

1. $(P \vee Q) \wedge \sim (P \wedge Q)$

P	Q	$P \wedge Q$	$P \vee Q$	\wedge	$\sim (P \wedge Q)$

2. $\sim P \vee Q \Rightarrow \sim R$

P	Q	R	$\sim P$	$\sim P \vee Q$	\Rightarrow	$\sim R$

3. $P \wedge (Q \vee R) \Leftrightarrow (P \wedge Q) \vee (P \wedge R)$

P	Q	R	P	\wedge	$Q \vee R$	\Leftrightarrow	$P \wedge Q$	\vee	$P \wedge R$

Decide if the statements are logically equivalent.

1. $P \Rightarrow (Q \wedge \sim Q)$ and $\sim P$

P	Q	$P \Rightarrow (Q \wedge \sim Q)$	$\sim P$

2. $P \vee Q$ and $\sim P \wedge \sim Q$

P	Q	$P \vee Q$	$\sim P \wedge \sim Q$

3. $P \Rightarrow Q$ and $\sim Q \Rightarrow \sim P$

P	Q	$P \Rightarrow Q$	$\sim Q \Rightarrow \sim P$