

31. Which of the following is true?

(1)  $p \wedge \sim p \equiv t$

(2)  $p \vee \sim p \equiv f$

(3)  $p \rightarrow q \equiv q \rightarrow p$

(4)  $p \rightarrow q \equiv \sim q \rightarrow \sim p$

31. (4)  $\sim q \rightarrow \sim p$  is contrapositive of  $p \rightarrow q$  and both convey the same meaning.