
Answer the following questions. Explain your reasoning. The following questions are designed to familiarize yourself with the basic definitions of logic. You should form a group and discuss the topics covered thus far.

There are many wordings that can be used to convey conditional statements. The following all mean $p \rightarrow q$:

If p then q.

p is sufficient for q

q is necessary for p

p only if q

q if p

q whenever p

1. Let S = you drink Schlitz

and

g = you drink good beer

Translate the following statements into symbols:

- (a) If you drink Schlitz, then you drink good beer.
- (b) Drinking Schlitz is a sufficient condition for drinking good beer.
- (c) Drinking good beer is a necessary condition for drinking Schlitz
- (d) You drink Schlitz only if you drink good beer.
- (e) You drink good beer if you drink Schlitz.
- (f) Which of the statements above are logically equivalent?

2. Translate the following statement into symbols:

In order to pass the driver's test the candidate must be able to parallel park.

3. Provide names for the statements required in the following verse from Lewis Carroll. Translate the statements into symbols.

If he goes to a party, he does not fail to brush his hair.
To look fascinating, it is necessary to be tidy.
If he is an opium eater, then he has no self-command.
If he brushes his hair, he looks fascinating.
He wears white kid gloves only if he goes to a party.
Having no self-command is sufficient to make one look untidy.