

Recall the Truth Table for the condition statement  $P \implies Q$ .

| $P$ | $Q$ | $P \implies Q$ |        |
|-----|-----|----------------|--------|
| T   | T   | T              | Line 1 |
| T   | F   | F              | Line 2 |
| F   | T   | T              | Line 3 |
| F   | F   | T              | Line 4 |

**Exercise.** A variant of Exercise 1.1.5 bcd (so there are parts b, c, and d but not a).

§1.1

Let  $P$  be the statement “Bella passed every assignment in Calculus I.”

Let  $Q$  be the statement “Bella received a grade of C or better in Calculus I.”

The instructor made the statement  $P \implies Q$ .

For each scenario below, say

- whether the instructor lied or told the true
- which line number number (from the above Truth Table) the scenario corresponds.

Justify your answer using complete sentences.

**b.** Suppose that Bella passed every assignment in Calculus I and received a grade of B–.

Put answer here.

**c.** Suppose that Bella passed every assignment in Calculus I and received a grade of C–.

Put answer here.

**d.** Suppose that Bella did not pass two assignments in Calculus I and received a grade of D.

Put answer here.