

Homework #1

due: 2013/09/24 P.M. 12:59

1. Formulate the arguments symbolically and determine whether each is valid.

Let

p: I miss the class more than 3 times.

q: I lose points.

r: I make a mistake on the first homework.

1.1

I miss the class more than 3 times if and only if I lose points.

I don't make a mistake and miss the class more than 3 times.

\therefore I lose points.

1.2

If I miss the class more than 3 times, then I lose points.

If I don't make a mistake on the first homework, then I lose points.

I make a mistake on the first homework and I lose points.

\therefore I don't miss the class more than 3 times.

2. Write truth table for the proposition

$P: (\bar{p} \leftrightarrow q) \wedge (r \vee \bar{q})$, and express it in disjunctive normal form.

3. Suppose a triangle which 3 side lengths are a, b and c.

Find the quantifier statement expressing condition of triangle and program it with **while** statement. (c.f. TP)