

**Homework:**  
**September 25th 2024**  
**deadline 2nd October**

- (i) Compute truth function of the formula

$$(P \Rightarrow (Q \vee S)) \Rightarrow \neg R.$$

- (ii) Proposition  $P$  says:

I shall walk only if it is rainy.

Write  $\neg P$ .

- (iii) Prove distributive law

$$P \wedge (Q \vee R) = (P \wedge Q) \vee (P \wedge R).$$

$$P \vee (Q \wedge R) = (P \vee Q) \wedge (P \vee R)$$

- (iv) Solve Exercise 1.3 in [DeT]