

# CM0845 Logic

## Propositional Logic: Some Properties

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## Remark

The reference for this section is van Dalen [2013, § 2.3].

# Finite Conjunctions and Disjunctions


## Finite conjunctions

$$\bigwedge_{i \leq 0} \varphi_i = \varphi_0,$$
$$\bigwedge_{i \leq n+1} \varphi_i = \bigwedge_{i \leq n} \varphi_i \wedge \varphi_{n+1}.$$

## Finite disjunctions

$$\bigvee_{i \leq 0} \varphi_i = \varphi_0,$$
$$\bigvee_{i \leq n+1} \varphi_i = \bigvee_{i \leq n} \varphi_i \vee \varphi_{n+1}.$$

# References

-  van Dalen, Dirk [1980] (2013). Logic and Structure. 5th ed. Springer (cit. on p. 2).