

Summary

Logical Equivalence, Tautology, and Contradiction

- To show that two sentences are **logically equivalent**, show that each follows validly from the other.
- To show that a sentence is a **tautology**, put the sentence on the right (false) side, and show that every path closes.
- To show that a sentence is a **contradiction**, put the sentence on the left (true) side, and show that every path closes.

Consistency and Inconsistency

- To show that a set of sentences is **consistent** (**simultaneously satisfiable**), put all the sentences on the left (true) side, and show that at least one path stays open.
- To show that a set of sentences is **inconsistent**, put all the sentences on the left (true) side, and show that every path closes.