

Summary: Testing Arguments for Validity Using Truth Trees

- Assume that there is a validity counterexample (a situation where the premises are all true, but the conclusion is false) by **putting all the premises on the left** (true) side of the tree trunk, and **the conclusion on the right** (false) side of the tree trunk.
- Break down **non-branching** sentences **before branching** sentences.
- **Check off each sentence** after that sentence is broken down.
- When a sentence branches, hang a **copy** of that branch off the end of **every open path** below that sentence.
- If a tree path has a **sentence letter on both** its **left and right sides**, **close** that path with an “**×**”.
- When all the sentences have been broken down (so that only sentence letters remain unchecked), look at the end result:

If **every path** has **closed**, the argument is **valid**.

If **even one path** is still **open**, the argument is **invalid**.