

Backward chaining

If a person has a passport (x), THEN they are eligible for international travel (x)

If someone eligible for international travel (x), THEN they can book a flight (x).

If someone books a flight (x), THEN they can travel to a foreign country (Sarah)

- Sarah has a passport

Inference rules

1. And - Elimination: it lets you take apart a statement like "~~A~~ A AND B" to figure out if "A" or "B" is true.
2. And - Introduction: it allows you to combine two separate statements, "A" and "B", into one statement "A AND B".
3. Or - Introduction: If you have "A" and "B", you can say "A or B" is true, without specifying which one.
4. Double - Negation: it helps you get rid of double negatives like turning "Not (NOT A)" into just "A".
5. Unit Resolution: When you have two clauses with opposite facts, you can use unit resolution to get rid of both, simplifying the logic.