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example:	1	2	3	4	Σ
points:					

- 1. Decide whether the following argument is valid using:
a) Semantic indirect proof, b) truth table method, c) by resolution method**

If it is Wednesday then we have a meeting.

If the office room is not ready then we don't have a meeting

It's Wednesday.

The Office room is ready.

- 2. Find *all models* of the following formula of propositional logic. *Decide*, what kind of formula it is (tautology, contradiction, satisfiable).**

$$\neg (p \wedge q) \equiv [\neg p \vee (r \supset q)]$$

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3. Prove that the following argument is logically valid.

*Everybody who knows Adam and Berta doesn't like Adam.
Some do like Adam though they know him.*

Somebody does not know Berta.

4. Find a model of the following formula. Prove that the formula is logically valid.

$$\exists x [P(x) \wedge Q(x)] \supset [\exists x P(x) \wedge \exists x Q(x)]$$