1. Study Section 3.6, Leibniz’s Rule as an Axiom, 4.1.

2. Prove (3.85a) Replace by true.
   See the hint in Exercise 3.76.

3. Prove (3.85b) Replace by true.

4. Prove (4.1) using the method of Section 4.1.
   That is, start with \((q \Rightarrow p)\) and get it to follow from \(p\). This method is a requirement, not a hint.

5. Prove (4.3) Monotonicity of \(\land\).
   Start with the RHS, eliminate the \(\Rightarrow\) with (3.59) followed by (3.47a) De Morgan and (3.45) Distributivity of \(\lor\) over \(\land\). After some simplifications you can use (3.76a) Strengthening to introduce \(\Leftrightarrow\).