Homework 3: Inference Rules and Proofs

Submission policy. Submit your answers on paper **before** the class starts on **Monday**, Feb. 10, 2020. No late submissions accepted.

1. Handwritten answers are fine but please make sure they are readable.

2. Your name should be printed at the very top of the document.

Administration. This assignment will be graded by the GTA.

Practice Questions – Do NOT submit these.

Textbook questions 3.6, 3.10, 3.11

Question that will be graded. Total Points 100.

Exercise 1. [100 points].
Using rules of inference and **no substitution**, prove that

$$\neg(p \rightarrow \neg q) \leftrightarrow (p \wedge q)$$

Use the notation introduced in class, and state, for each line, the rule of inference that justifies it. Do not skip steps.