Definition 1. This is the first definition of the first homework.

Exercise 1. This is the first exercise of the first homework.

Proof. This is the first proof of the first exercise of the first homework. We can easily reference labels from main.tex, e.g. theorem 1.1.

Exercise 2. This is the second exercise of the first homework.

Proof. This is the first proof of the second exercise of the first homework. We reference exercise 1 here.

Exercise 3. This is the third exercise of the first homework.