

# Your Title

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## Exercise 1

The exercises are automatically numbered, starting from one. Packages such as `amsmath` and `hyperref` are included by default.

Paragraphs are not indented, but are instead separated by some vertical space.

As an example: the *standard inner product* on  $\mathbb{R}^n$  is defined as

$$\vec{a} \cdot \vec{b} := a_1 b_1 + \cdots + a_n b_n \quad \text{for } \vec{a}, \vec{b} \in \mathbb{R}^n.$$

Note that `*` can be used instead of `\cdot`, and `\R` instead of `\mathbb{R}`. (For a normal asterisk, use `\ast`.) Of course, there are also macros for the natural numbers etc. Commands such as `\abs{}` and `\set{}` can be used to create (scaled) delimiters. For example,

$$\left| \frac{1}{1 - \lambda h} \right| \leq 1 \quad \text{and} \quad \left\{ x \in \mathbb{R} \mid 1 < \sqrt{x^3 + 2} < \frac{3}{2} \right\}.$$

The starred version of these commands disables the auto-scaling.

## Exercise 2

Each exercise (except the first) starts on a new page. You can disable this behavior using the starred version of the command.

### **Exercise 3 (10 pts)**

Optionally, you can specify the number of points for an exercise.

For more information, refer to <https://github.com/gijs-pennings/latex-homework>.