Your Assignment

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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

$$\vec{a} \cdot \vec{b} := x_1 y_1 + \cdots + x_n y_n \qquad \text{for } \vec{a}, \vec{b} \in \mathbb{R}^n.$$

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

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

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`.