

SpaceX Coding Assessment (Python)

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1 Task

2 Assumptions

Before I explain how I approached this problem, it is necessary to understand the assumptions I made before starting this. The exercises are automatically numbered, starting from one. Packages such as

3 Code

4 Testing

5 Complexity Analysis

6 Final Thoughts

7 Assumptions

8 Assumptions

`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

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

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

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

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

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