Python and sampled measurements — review sheet

Use this after attempting the worked examples and practice. Explain each claim in words before calculating.

Key ideas

- Names and values need units and a clear meaning.
- A string containing digits is still text.
- Assignment uses the values available when it runs.
- Unit conversion changes numbers according to a relationship.
- Points, connectors and model predictions are different evidence.
- A clean ordered run checks notebook dependencies.

Common errors and repairs

Change a label without changing values. Convert the numbers and update the unit label together.

Treat an earlier assignment as automatically refreshed. Rerun dependent calculations after changing an input.

Call the endpoint rate an instantaneous derivative. It is an average over the stated interval.

Retrieve without your notes

- How many minutes are 210 seconds?
- Does a shared Celsius-to-kelvin offset change temperature differences?
- What does restarting a notebook check?

Readiness check

- Run a supplied cell or script and distinguish code, output and an error message.
- Store and print numerical values and text labels without confusing their types.
- Convert a time and a temperature unit while retaining the scientific meaning.
- Read a labeled plot and distinguish an observation from an interpolated or modeled value.
- Restart and rerun a short notebook in order to check reproducibility.