

III.7 Error control and adaptive step size

In practice, one wants to choose the step size (the h !) sufficiently small to ensure some required precision and sufficiently large to avoid unnecessary computational work.

To achieve this, we need some local error estimate to indicate if the step size should be "small" or "large".

Idea: perform a step with two methods, where a first method is compared to the result of a second, more precise, method

↳ the digits that match are assumed to be correct! 