What is a Numerical Method?

Aim

To explain the notion of a numerical method.

Learning Outcomes

At the end of this section you will:

- Understand what a numerical method is,
- Understand the reasons for using numerical methods.

Numerical analysis involves the study of methods of computing numerical data. In many problems this implies producing a sequence of approximations by repeating the procedure again and again. People who employ numerical methods for solving problems have to worry about the following issues: the rate of convergence (how long does it take for the method to find the answer), the accuracy (or even validity) of the answer, and the completeness of the response (do other solutions, in addition to the one found, exist).

Numerical methods provide approximations to the problems in question. No matter how accurate they are they do not, in most cases, provide the exact answer. In some instances working out the exact answer by a different approach may not be possible or may be too time consuming and it is in these cases where numerical methods are most often used.

Related Reading
