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## methods of solving ODEs

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There are many different methods of solving ordinary differential equations. These are tabulated here and divided into sections for linear and non-linear ODEs. These sections are further subdivided into exact, numerical and quantitative methods.

## **1 Linear ODEs**

### **1.1 Exact methods**

- General solution of linear differential equation
- Linear differential equation of first order
- Method of separation of variables
- Method of integrating factors
- Method of undetermined coefficients
- Frobenius' Method
- Method of Green's functions

### **1.2 Numerical methods**

- Runge-Kutta method
- Heun method
- Rayleigh-Ritz method

### **1.3 Quantitative methods**

## **2 Non-linear ODEs**