This bachelor's thesis covers the numerical methods of solving ordinary differential equations - the explicit Euler's method, the implicit Euler's method, and the fourth-order Runge-Kutta's method. These methods are implemented onto physics problems - free fall in a gravitational field and the damped harmonic oscillator. Using the fourth-order Runge-Kutta method, the additional problems of the simple gravity pendulum and the movements of the Earth and Mercury around the Sun are inspected further. The thesis is intended to be used as a brief introduction and guide to implementing numerical methods for students of the future subject of Numerical methods in the subject of physics and for high school students who have taken an interest in them.