

If displacement (position) is given as function of time, we can get

velocity as function of time as  $V = \frac{dx}{dt}$ , and then the equation of

acceleration as function of time can be obtained with the help of

differentiation as  $a = \frac{dV}{dt}$ .



If acceleration is given as function of time, we can get velocity equation as

function of time as  $\int_{V_1}^{V_2} dV = \int_{t_1}^{t_2} a \cdot dt$  by integration. From velocity

equation as function of time, we can get displacement-time equation by

integration as  $\int_{x_1}^{x_2} dx = \int_{t_1}^{t_2} V \cdot dt$

