

$$\frac{du}{dt} = u^q \quad t \in [0, 10]$$

quando $q = 1$

$$u(x) = \frac{dy}{dt} = u$$

$$\frac{u'(x)}{u(x)} = 1$$

$$\frac{\frac{du}{dt}}{u} = 1$$

$$\int \frac{\frac{du}{dt}}{u} dt = \int 1 dx$$

$$u = C_1 e^x$$

$$u = e^x$$

$$\frac{du}{dt} = u^q$$

$$\frac{du}{dt} u^{-q} = 1$$

$$\int du u^{-q} = \int 1 dt$$

$$-q \neq -1$$

$$\frac{u^{1-q}}{1-q} = t + C$$

$$u^{1-q} = t + C (1-q)$$

$$u = \sqrt[1-q]{(t+C)(1-q)}$$