

$$\frac{dy}{dx} = \frac{x}{y}$$

$$y dy = x dx$$

$$\int y dy = \int x dx$$

$$\overset{||}{\frac{1}{2}y^2 + C_1} \quad \overset{||}{\frac{1}{2}x^2 + C_2}$$

$$\frac{1}{2}y^2 = \frac{1}{2}x^2 + C_2 - C_1$$

$$= \frac{1}{2}x^2 + C_3$$

$$y^2 = x^2 + C_4$$

$$y = \pm \sqrt{x^2 + C_4}$$