

$$z = x(x + C_1)$$

$$z = x^2 + C_1 x$$

$$y' = x^2 + C_1 x$$

$$y = \frac{x^3}{3} + C_1 \frac{x^2}{2} + C_2 \quad \text{Omlern}$$

$$3) \quad y'' + (y')^2 = 2e^{-y}$$

не сопряжено x .

$$\begin{cases} y' = p \\ y'' = p \frac{dp}{dy} \end{cases}$$

$$p \frac{dp}{dy} + p^2 = 2e^{-y}$$

$$p \cdot p' + p^2 = 2e^{-y} \quad \text{нен. оmm. } p^2$$

$$\begin{cases} p^2 = 2uv \\ 2pp' = u'v + uv' \end{cases}$$

$$\frac{1}{2}(u'v + uv') + 2uv = 2e^{-y}$$

$$u'v + uv' + 2uv = 2e^{-y}$$

$$u'v + u(v' + 2v) = 2e^{-y}$$

$$v' + 2v = 0$$

$$\frac{dv}{dy} = -2v; \quad \frac{dv}{v} = -2dy; \quad \ln|v| = -2y$$