15.04

fredag 23 december 2022 13:41

c)

$$y' - ky = 0$$

$$g(x) = -k \quad G_1(x) = -kx \quad IF = e^{-kx}$$

$$y' e^{-kx} - k y e^{-kx} = 0$$

$$\left(y \cdot e^{-kx}\right) = \int 0 \, dx = C$$

Svar: $y = C e^{kx}$

d)

$$y' + xy = 0$$

$$g(x) = x \quad G_2(x) = \frac{x^2}{2} \quad IF = e^{x^2/2}$$

$$y' e^{x^2/2} + x y e^{x^2/2} = 0$$

$$y e^{x^2/2} = \int 0 \, dx = C$$

Svar: $y = C e^{-x^2/2}$