

LS1.Version B.

$$xy - y = 2x^3$$

Omforma till standardform.

$$y - \frac{1}{x}y = 2x^2 \quad (\#)$$

Bestäm en integrerande faktor.

$$e^{-\frac{1}{x}dx} = e^{-\ln|x|} = e^{\ln|x|^{-1}} = |x|^{-1} = \pm \frac{1}{x}$$

Multipluera (#) med $\frac{1}{x}$.

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

$$\frac{d}{dx} \frac{1}{x} y = 2x$$

$$\frac{1}{x} y = x^2 + C$$

$$y = x^3 + Cx$$