

Lesson 70

$$7. a) |y| = e^{-3x+C}$$

$$y = Ce^{-3x}$$

* Sometimes we use a k to represent the constant instead of C .

$$b) |y| = e^{2t+C}$$

$$y = Ce^{2t}$$

$$8 a) \int \frac{dy}{y} = \int 4x dx$$

work for 8

$$\ln|y| = 2x^2 + C_1$$

$$|y| = e^{2x^2 + C_1}$$

$$|y| = e^{2x^2} \cdot e^{C_1}$$

→ just another constant. We make it clear that it is different by using big C or k .

$$\text{Answer: } y = Ce^{2x^2} \text{ or } y = ke^{2x^2}$$

$$b) |y| = e^{-t+C}$$

$$y = Ce^{-t}$$