

$$\textcircled{D} / 3 - 1 y$$

$$8y'^3 = 27y$$

$$t = y' \Rightarrow 8t^3 = 27y$$

$$y = \frac{8t^3}{27}$$

$$\frac{dy}{dx} = t$$

$$dx = \frac{dy}{t} = \frac{\frac{8}{27} t^3 dt}{t} = \frac{8}{9} t dt$$

$$\int dx = \int \frac{8}{9} t dt$$

$$x = \frac{8}{9} \cdot \frac{1}{2} t^2 + C$$

$$x = \frac{4}{9} t^2 + C$$

$$t = \pm \sqrt{(x-C) \cdot \frac{9}{4}} = \pm \frac{3}{2} \sqrt{x-C}$$

$$y = \frac{8}{27} \left(\pm \frac{3}{2} \sqrt{x-C} \right)^3 = \pm \left(\sqrt{x-C} \right)^3$$

$$y' = \pm \frac{3}{2} \sqrt{x-C}$$

$$y = \pm \left(\sqrt{x-C} \right)^3$$

$$8 \left(\pm \frac{3}{2} \sqrt{x-C} \right)^3 = \pm 27 \left(\sqrt{x-C} \right)^3$$

$$27 \left(\pm \left(\sqrt{x-C} \right)^3 \right) = \cancel{27} 27 \left(\sqrt{x-C} \right)^3$$

$$= 27 y$$

$$y'' =$$

$$30$$

$$2$$

$$(\star)$$

$$\frac{dy}{\sqrt{e^y + 1}}$$