

February 11

How do you solve a
differential equation
problem?

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Students will verbally explain how to
find the solution to a
differential equation.
(using the words:
separate, initial value, constant ...)

$$\frac{dy}{dx} = \frac{\cos(x)}{3y^2}$$

$$y=1, \quad x=\frac{\pi}{2}$$

$$y^3 = \sin x$$

$$y = \sqrt[3]{\sin x}$$

$$t^3 y'' + 4y^2 = 0$$

$$y' = \frac{dy}{dt}$$

$$t^3 \left(\frac{dy}{dt} \right) + 4y^2 = 0$$

$$4x + 10 = 0$$

$$\frac{-4y^2 - 4y^2}{t^3 \left(\frac{dy}{dt} \right) = -4y^2}$$

$$\frac{dy}{dt} = -\frac{4y^2}{t^3}$$

Pg 508
#15-36
(mult of 3), 10