

SOLVING DIFFERENTIAL EQUATIONS

Period _____

1. FIND GENERAL SOLUTION.

a, $dy/dx = 1/x^2$

b, $dy/dx = 1/x$

2. FIND PARTICULAR SOLUTION

TO THE INITIAL VALUE PROBLEM

$$\frac{dy}{dx} = \sin(x), y(\pi) = \frac{1}{2}$$

3. ^aSOLVE FOR ^b y , ^cFIND y VALUE, ^dGRAPH.

$$\left\{ \begin{array}{l} dy/dx = 3x^2 y(1) = 2 \\ \text{FIND } y(3). \text{ GRAPH} \end{array} \right.$$

4. SAME INSTRUCTIONS AS ABOVE.

$$\left\{ \begin{array}{l} dy/dx = \cos(e^x), y(0) = 1 \\ \text{FIND } y(2). \text{ GRAPH.} \end{array} \right.$$