

## How to Check Your Answer

While it may be difficult to solve a differential equation, it is fairly easy to see if a proposed solution is correct. Check the following results by plugging the proposed answer into the original equation.

a)  $y = \frac{1}{3}e^x$  is a solution to  $4y'' - y = e^x$ .

b)  $y = \frac{1}{x}$  is a solution to  $x^2 \frac{d^2y}{dx^2} + 3x \frac{dy}{dx} + y = 0$ .

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