

Repeated Roots Issues

Consider the second-order linear differential equation

$$y'' - 2y' + y = 0$$

What does our normal method get for a general solution?

Reduction of Order

We need a way to take one solution of a second-order linear equation and use this to get another. One method of doing this, and the way presented here, is reduction of order.

Example. Find the general solution to

$$y'' - 2y' + y = 0$$