

# An Example of Undetermined Coefficients

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We begin with a few words about the big picture of solving differential equations. If that was a nonlinear equation, we would go to computer solutions. When the equation is linear.

$$y'' - 3y' + 2y = 4t$$

There's still an integral to do involving the impulse response. But there are few, the most beautiful, the most simple equations when the right hand side has a special form. We can first find the null solution with right hand side zero. But we need a particular solution. So the idea is to try the form we know the solution will have.