Week 6
MATH 34B
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14.3 Find the solution of the differential equation $y = (2t+1)^2$ satisfying the initial condition $y(0) = 6$.

14.6 Find the general solution of the equation $y'' = e^{2t}$.

14.9 The number of bees in a forest is growing at a rate of $200 + 10t$ bees per day, t days after being introduced into the forest. If initially 20000 bees are introduced, how many bees are there after 100 days?

16.4 The function y satisfies a differential equation of the form y' = ky for some number k. If you are told that when t = 3 that y is 5 and the rate of change of y is 4 then what is k?