Spring 2018-2019
Math 342
Applied Mathematics

Mar 25
Solve the given Volterra integral equation using the series solution method.

1. $y(x) = 1 + x - \frac{2}{3}x^3 - \frac{1}{2}x^4 + 2\int_0^x ty(t)dt$

2. $y(x) = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} - \int_0^x (x-t)y(t)dt$

3. $y(x) = 1 - 2\int_0^x y(t)dt$

4. $y(x) = x + \int_0^x (x-t)y(t)dt$

5. $y(x) = 1 - x - \int_0^x (x-t)y(t)dt$