

Spring 2018-2019
Math 342
Applied Mathematics

Mar 11

Solve the given Fredholm equation using the Adomian decomposition method.

1. $y(x) = x^3 - \frac{1}{5}x + \int_0^1 xty(t)dt$

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

3. $y(x) = x + \cos x - 2x \int_0^{\pi/6} y(t)dt$

4. $y(x) = \sinh x - e^{-1}x + \int_0^1 xty(t)dt$

5. $y(x) = \tan x - \int_{-\pi/3}^{\pi/3} e^{\arctan x} y(t)dt$