Spring 2018-2019
Math 342
Applied Mathematics

Feb 18
Solve the given Fredholm equation using the direct computation method.

1. $y(x) = e^{2x} - \frac{1}{4}\left(e^2 + 1\right)x + \int_0^1 xty(t)dt$

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

3. $y(x) = \sec x \tan x + x - \int_0^{\pi/3} xy(t)dt$

4. $y(x) = 1 - \int_{0^+}^1 \ln(xt)y(t)dt$

5. $y(x) = 1 + \frac{1}{2}\int_0^{\pi/4} \sec^2 xy(t)dt$