

**Spring 2018-2019**  
**Math 342**  
*Applied Mathematics*

**Feb 19**

Solve the given Fredholm integral equations using successive approximation method.

1. 
$$y(x) = \frac{6}{7}x^3 + \frac{5}{7} \int_0^1 xty(t)dt$$

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

3. 
$$y(x) = -\frac{1}{4} + \sec x \tan x + \frac{1}{4} \int_0^{\pi/3} y(t)dt$$

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

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