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

**Apr 15**
Solve the given Fredholm integro-differential equation by *direct computation method.*

1. $y'(x) = \frac{1}{6} + \frac{5}{36}x - \int_0^1 xty(t)dt$; $y(0) = \frac{1}{6}$.

2. $y'(x) = \frac{x}{21} - \int_0^1 xty(t)dt$; $y(0) = \frac{1}{6}$.

3. $y''(x) = -\sin x + x - \int_0^{\pi/2} xty(t)dt$; $y(0) = 0$, $y'(0) = 1$.

4. $y''(x) = \frac{9}{4} - \frac{x}{3} + \int_0^1 (x-t)y(t)dt$; $y(0) = y'(0) = 0$.

5. $y'(x) = \cos x + 1 - x + \int_0^{\pi/2} (x-t)y(t)dt$; $y(0) = 0$.