Feb 19
Solve the given Fredholm integral equations using successive approximation method.

1. $y(x) = \frac{6}{7}x^3 + \frac{5}{7}\int\limits_{0}^{1} xt\,y(t)dt$

2. $y(x) = \sin x + \int\limits_{0}^{\pi/2} \sin x \cos t\,y(t)dt$

3. $y(x) = -\frac{1}{4} + \sec x \tan x + \frac{1}{4}\int\limits_{0}^{\pi/3} y(t)dt$

4. $y(x) = \frac{1}{2}(e^x + e^{-x}) + (1 - e^{-1})x - \int\limits_{0}^{1} xt\,y(t)dt$

5. $y(x) = \frac{1}{4}x + \sin x - \frac{1}{4}\int_{0}^{\pi/2} xy(t)dt$