Apr 2

Solve the given Volterra integral equation by the successive substitutions method.

1. $y(x) = \frac{x^2}{2} + \int\limits_0^x y(t)dt$

2. $y(x) = \frac{x^3}{6} + \int\limits_0^x (x-t)y(t)dt$

3. $y(x) = 1 - \frac{x^2}{2} - \int\limits_0^x 342y(t)dt$

4. $y(x) = 1 - x + \int\limits_0^x 4y(t)dt$

5. $y(x) = 1 - x + \frac{1}{2}x^2 - \int\limits_0^x (x-t)y(t)dt$