



2. $y(x) + \lambda \int_a^x (x-t)y(t) dt = f(x).$

1°. Solution for $\lambda > 0$:

$$y(x) = f(x) - k \int_a^x \sin[k(x-t)]f(t) dt, \quad k = \sqrt{\lambda}.$$

2°. Solution for $\lambda < 0$:

$$y(x) = f(x) + k \int_a^x \sinh[k(x-t)]f(t) dt, \quad k = \sqrt{-\lambda}.$$

Reference

Polyanin, A. D. and Manzhirov, A. V., *Handbook of Integral Equations*, CRC Press, Boca Raton, 1998.