



11. $y(x) + A \int_a^x \cosh[\lambda(x-t)]y(t) dt = f(x).$

Solution:

$$y(x) = f(x) + \int_a^x R(x-t)f(t) dt,$$

where

$$R(x) = \exp\left(-\frac{1}{2}Ax\right) \left[\frac{A^2}{2k} \sinh(kx) - A \cosh(kx) \right], \quad k = \sqrt{\lambda^2 + \frac{1}{4}A^2}.$$

Reference

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