

10.
$$y(x) + A \int_{a}^{x} (x-t)e^{\lambda(x-t)}y(t) dt = f(x)$$
.

 1° . Solution for A > 0:

$$y(x) = f(x) - k \int_{a}^{x} e^{\lambda(x-t)} \sin[k(x-t)] f(t) dt, \qquad k = \sqrt{A}.$$

 2° . Solution for A < 0:

$$y(x) = f(x) + k \int_{a}^{x} e^{\lambda(x-t)} \sinh[k(x-t)] f(t) dt, \qquad k = \sqrt{-A}.$$

Reference

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

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