29. $\displaystyle\int_a^x J_0\big(\lambda(x-t)\big)\,y(t)\,dt = f(x).$

Here, $J_\nu(z)$ is the Bessel function of the first kind and $f(a) = 0$.

Solution:

$$y(x) = \frac{1}{\lambda}\left(\frac{d^2}{dx^2} + \lambda^2\right)^2 \int_a^x (x-t)\,J_1\big(\lambda(x-t)\big)\,f(t)\,dt.$$

Reference

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

