



7. $y(x) + \int_a^x f(t)y^k(t) dt = A.$

Solution:

$$y(x) = \left[A^{1-k} + (k-1) \int_a^x f(t) dt \right]^{\frac{1}{1-k}}.$$

Reference

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