



8.  $y(x) + \int_a^b f(t, y(t)) dt = g(x).$

A solution:  $y(x) = g(x) + \lambda$ , where  $\lambda$  is determined by the algebraic (or transcendental) equation

$$\lambda + F(\lambda) = 0, \quad F(\lambda) = \int_a^b f(t, g(t) + \lambda) dt.$$

### Reference

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