



5. 
$$\int_0^x f\left(\frac{t}{x}\right) y(t) y(x-t) dt = Ax^\mu e^{\lambda x}.$$

Solutions:

$$y(x) = \pm \sqrt{\frac{A}{I}} x^{\frac{\mu-1}{2}} e^{\lambda x}, \quad I = \int_0^1 f(z) z^{\frac{\mu-1}{2}} (1-z)^{\frac{\mu-1}{2}} dz.$$

### Reference

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