

3. 
$$\int_0^\infty f(t)y(t)y\left(\frac{x}{t}\right)dt = Ax^{\lambda}.$$

Solutions:

$$y_1(x) = \sqrt{\frac{A}{I}} x^{\lambda}, \quad y_2(x) = -\sqrt{\frac{A}{I}} x^{\lambda}, \qquad I = \int_0^{\infty} f(t) dt.$$

## Reference

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

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