



2. $\int_0^x y(t)y(x-t) dt = A^2 x^\mu e^{\lambda x}.$

Solutions:

$$y(x) = \pm \frac{A\sqrt{\Gamma(\mu+1)}}{\Gamma\left(\frac{\mu+1}{2}\right)} x^{\frac{\mu-1}{2}} e^{\lambda x},$$

where $\Gamma(z)$ is the gamma function.

Reference

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