



32. 
$$\int_a^x I_0(\lambda\sqrt{x-t})y(t) dt = f(x).$$

Here,  $I_\nu(z)$  is the modified Bessel function of the first kind and  $f(a) = 0$ .

Solution: 
$$y(x) = \frac{d^2}{dx^2} \int_a^x J_0(\lambda\sqrt{x-t})f(t) dt.$$

### Reference

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