



4.  $\int_a^x \sqrt{x-t} y(t) dt = f(x), \quad f(a) = 0.$

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

### Reference

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