



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.