



20.
$$\int_a^x \sinh(\lambda\sqrt{x-t})y(t) dt = f(x), \quad f(a) = 0.$$

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

Reference

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