



13.
$$\int_a^b (\ln|x-t| + \beta)y(t) dt = f(x).$$

By setting

$$x = e^{-\beta}z, \quad t = e^{-\beta}\tau, \quad y(t) = Y(\tau), \quad f(x) = e^{-\beta}g(z),$$

we arrive at an equation of the form 3.12:

$$\int_A^B \ln|z-\tau|Y(\tau) d\tau = g(z), \quad A = ae^\beta, \quad B = be^\beta.$$

Reference

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