



33.
$$\int_a^x [g(x) - g(t)]y(t) dt = f(x).$$

It is assumed that $f(a) = f'_x(a) = 0$ and $f'_x/g'_x \neq \text{const.}$

Solution:
$$y(x) = \frac{d}{dx} \left[\frac{f'_x(x)}{g'_x(x)} \right].$$

Reference

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