



**48.**  $y(x) - y(\omega(x)) = 0$ ,     **where**  $\omega(\omega(x)) = x$ .

Solution:

$$y(x) = \Phi(x, \omega(x)),$$

where  $\Phi(x, z) = \Phi(z, x)$  is any symmetric function of two arguments.

### Reference

**Polyanin, A. D. and Manzhirov, A. V.**, *Handbook of Integral Equations: Exact Solutions (Supplement. Some Functional Equations)* [in Russian], Faktorial, Moscow, 1998.