



9.  $y(x^2) - ay^2(x) = 0$ .

Solution:

$$y(x) = \frac{1}{a}x^C,$$

where  $C$  is an arbitrary constant. In addition, the function  $y(x) \equiv 0$  is a continuous particular solution.

### Reference

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