



**13.**  $y^2(x) + Ay(x)y(a/x) + By^2(a/x) + Cy(x) + Dy(a/x) = f(x).$

This is a special case of equation 4, Subsection 2.3.

Solution in parametric form:

$$\begin{aligned}y^2 + Ayw + Bw^2 + Cy + Dw &= f(x), \\w^2 + Ayw + By^2 + Cw + Dy &= f(a/x).\end{aligned}$$

Eliminating  $w$ , the solution can be rewritten in implicit form.

### Reference

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