

41. 
$$y_{xx}'' - a(y_x')^2 + be^{4ay} + f(x) = 0$$
.

The substitution  $w=e^{-ay}$  leads to Ermakov (Yermakov) equation 3.5:  $w_{xx}^{\prime\prime}-af(x)w=abw^{-3}$ .

## Reference

**Polyanin, A. D. and Zaitsev, V. F.,** *Handbook of Exact Solutions for Ordinary Differential Equations, 2nd Edition,* Chapman & Hall/CRC, Boca Raton, 2003.

Copyright © 2004 Andrei D. Polyanin

http://eqworld.ipmnet.ru/en/solutions/ode/ode0341.pdf