

12. 
$$y''_{xx} = e^{-ax} f(e^{ax} y)$$
.

The transformation  $z=e^{ax}y,\ w=y_x'/y$  leads to a first-order equation:  $z(w+a)w_z'=z^{-1}f(z)-w^2$ .

## 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/ode0312.pdf