

24.  $xy_{xx}'' = f(y)y_x'$ .

The substitution  $w(y) = xy'_x/y$  leads to a first-order linear equation:  $yw'_y = -w + 1 + f(y)$ .

## 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/ode0324.pdf