

31.  $y''_{xx} = -ay'_x + e^{ax}f(ye^{ax})$ .

The transformation  $\xi=e^{ax},\ w=ye^{ax}$  leads to an autonomous equation of the form 3.1:  $w_{\xi\xi}''=a^{-2}f(w)$ .

## Reference

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

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