

35. 
$$x[f(x^ny^m) + my^kg(x^ny^m)]y'_x = y[h(x^ny^m) - ny^kg(x^ny^m)].$$

The transformation  $t = x^n y^m$ ,  $z = y^{-k}$  leads to a linear equation with respect to z = z(t):

$$t[nf(t) + mh(t)]z'_t = -kh(t)z + kng(t).$$

## 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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