



Exact Solutions > Ordinary Differential Equations >
Second-Order Nonlinear Ordinary Differential Equations > Lienard Equation

17. $y''_{xx} + f(y)y'_x + g(y) = 0.$

Lienard equation. The substitution $w(y) = y'_x$ leads to a first-order equation: $ww'_y + f(y)w + g(y) = 0.$

Reference

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

Lienard Equation

Copyright © 2004 Andrei D. Polyanin

<http://eqworld.ipmnet.ru/en/solutions/ode/ode0317.pdf>