

29.
$$y''_{xx} - (ae^{2\lambda x} + be^{\lambda x} + c)y = 0$$
.

The transformation $z=e^{\lambda x}$, $w=z^{-k}y$, where $k=\sqrt{c}/\lambda$, leads to an equation of the form 2.11: $\lambda^2 z w_{zz}'' + \lambda^2 (2k+1) w_z' - (az+b) w = 0$.

Reference

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

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