First-Order Partial Differential Equations > Linear Equations > Section 1.2

13. $f(x)\dfrac{\partial w}{\partial x} + g(y)\dfrac{\partial w}{\partial y} = h(x, y).$

The transformation

$$\xi = \int \frac{dx}{f(x)}, \qquad \eta = \int \frac{dy}{g(y)}$$

leads to an equation of the form 1.2.6 for $w = w(\xi, \eta)$.

Reference

Polyanin, A. D., Zaitsev, V. F., and Moussiaux, A., *Handbook of First Order Partial Differential Equations*, Taylor & Francis, London, 2002.