



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

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

The transformation

$$\xi = \int g(x) dx, \quad \eta = \int f(y) dy$$

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.