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15.　$\dfrac{\partial w}{\partial x} + y F_1\left(x, \dfrac{\partial w}{\partial y}\right) + F_2\left(x, \dfrac{\partial w}{\partial y}\right) = 0.$

Complete integral:

$$w = \varphi(x)y - \int F_2\big(x, \varphi(x)\big)\,dx + C_1,$$

where C_1 is an arbitrary constant and the function $\varphi(x)$ is determined by solving the ordinary differential equation $\varphi'_x + F_1(x, \varphi) = 0$.

Reference

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