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7. $f_1(x)\dfrac{\partial w}{\partial x} + f_2(y)\left(\dfrac{\partial w}{\partial y}\right)^2 = g_1(x) + g_2(y).$

Complete integral:

$$w = \int \frac{g_1(x) - C_1}{f_1(x)}\, dx + \int \sqrt{\frac{g_2(y) + C_1}{f_2(y)}}\, dy + C_2,$$

where C_1 and C_2 are arbitrary constants.

Reference

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

http://eqworld.ipmnet.ru/en/solutions/fpde/fpde3107.pdf