



27.  $y'_x = f(ax + by + c).$

If  $b \neq 0$ , the substitution  $u(x) = ax + by + c$  leads to a separable equation:  $u'_x = bf(u) + a.$

### References

**Kamke, E.,** *Differentialgleichungen: Lösungsmethoden und Lösungen, I, Gewöhnliche Differentialgleichungen*, B. G. Teubner, Leipzig, 1977.

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