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Linear Systems of Three or More Ordinary Differential Equations

2. Linear Systems of Three or More Ordinary Differential Equations

1. $x'_t = ax, \quad y'_t = bx + cy, \quad z'_t = dx + ky + pz.$
2. $x'_t = cy - bz, \quad y'_t = az - cx, \quad z'_t = bx - ay.$
3. $ax'_t = bc(y - z), \quad by'_t = ac(z - x), \quad cz'_t = ab(x - y).$
4. $x'_t = (a_1f + g)x + a_2fy + a_3fz, \quad y'_t = b_1fx + (b_2f + g)y + b_3 fz, \quad z'_t = c_1fx + c_2fy + (c_3f + g)z.$
5. $x'_t = h(t)y - g(t)z, \quad y'_t = f(t)z - h(t)x, \quad z'_t = g(t)x - f(t)y.$
6. $x'_k = a_{k1}x_1 + a_{k2}x_2 + \dots + a_{kn}x_n; \quad k = 1, 2, \dots, n.$

The EqWorld website presents extensive information on solutions to various classes of ordinary differential equations, partial differential equations, integral equations, functional equations, and other mathematical equations.

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<http://eqworld.ipmnet.ru/en/solutions/sysode/sode-toc2.pdf>