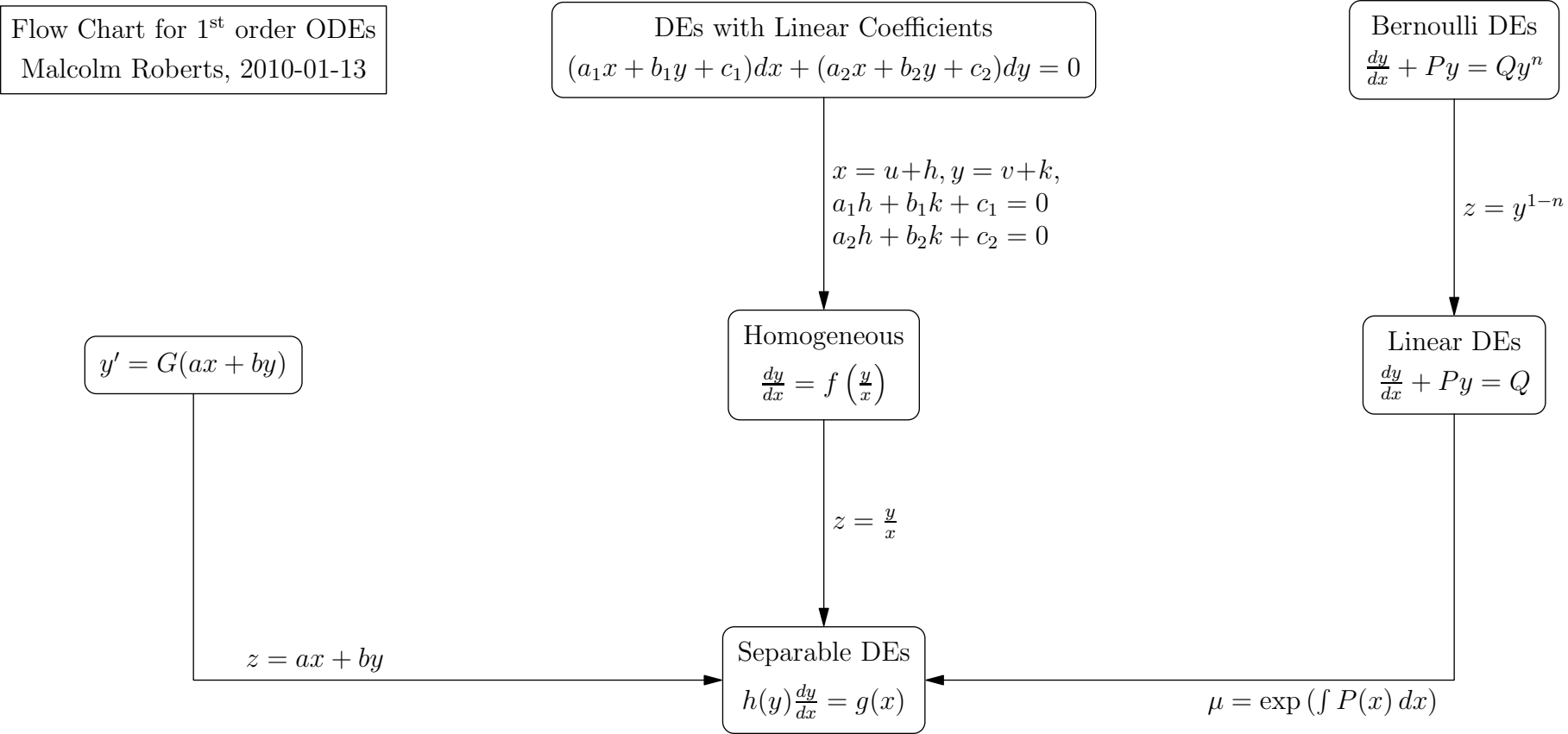
Flow Chart for 1st order ODEs
Malcolm Roberts, 2010-01-13
DEs with Linear Coefficients
$(a_1x + b_1y + c_1)dx + (a_2x + b_2y + c_2)dy = 0$
Bernoulli DEs
$\frac{dy}{dx} + Py = Qy^n$
$x = u+h, y = v+k,$
$a_1h + b_1k + c_1 = 0$
$a_2h + b_2k + c_2 = 0$
$z = y^{1-n}$
$y' = G(ax + by)$
Homogeneous
$\frac{dy}{dx} = f\left(\frac{y}{x}\right)$
Linear DEs
$\frac{dy}{dx} + Py = Q$
$z = \frac{y}{x}$
$z = ax + by$
Separable DEs
$h(y)\frac{dy}{dx} = g(x)$
$\mu = \exp\left(\int P(x)\,dx\right)$