

Integral Curves: Constant Coefficients

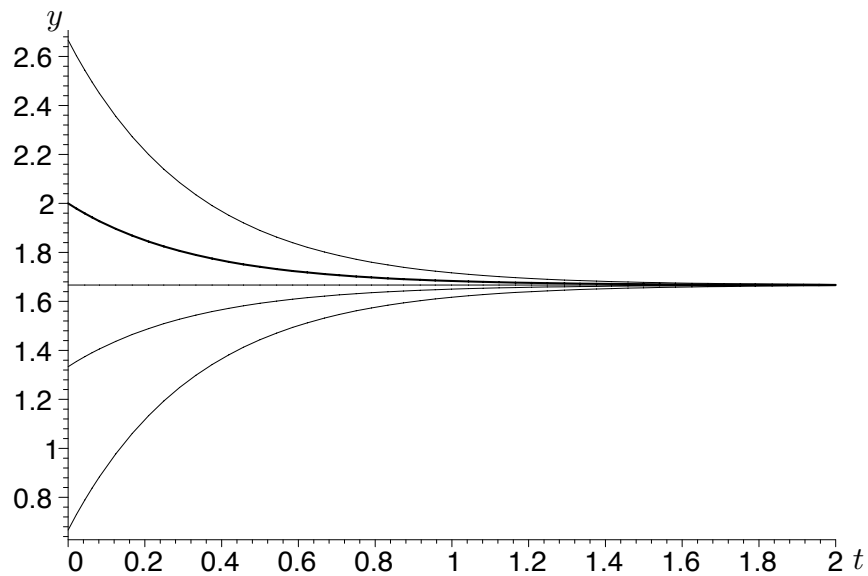
The solution to the system

$$\dot{y} + 3y = 5$$

is

$$y(t) = Be^{-3t} + \frac{5}{3}. \tag{1}$$

Here are some integral curves of the solution.



Graphs of (1) for $B = -1, -1/3, 0, 1/3$ (dark line), and 1.