

$$3. \begin{cases} x' + 2y = 0 \\ x' - y' = 0 \end{cases}$$

$$\begin{cases} D[x] + 2[y] = 0 \\ D[x] - D[y] = 0 \end{cases}$$


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$$2[y] + D[y] = 0$$

$$(D+2)[y] = 0$$

$$\underline{y(t) = c_2 e^{-2t}}$$

$$\begin{cases} D[x] + 2[y] = 0 & / \cdot D \\ D[x] - D[y] = 0 & / \cdot 2 \end{cases}$$

$$+ \begin{cases} D^2[x] + 2D[y] = 0 \\ 2D[x] - 2D[y] = 0 \end{cases}$$


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$$D^2[x] + 2D[x] = 0$$

$$(D^2 + 2D)[x] = 0$$

$$(D(D+2))[x] = 0$$

$$\underline{x(t) = c_1 + c_2 e^{-2t}}$$