Linear Algebra Exercises:

1) Qu - Part A. Determine.... $\frac{dx}{dt} = 4x + 2y$

↳ if we want to write them as a system of equation then to the matrix form it should be $\frac{dy}{dt} = -x + y$

$\rightarrow \frac{d}{dt}\begin{bmatrix} x \\ y \end{bmatrix} = \underbrace{\begin{bmatrix} 4 & 2 \\ -1 & 1 \end{bmatrix}}_{A}\begin{bmatrix} x \\ y \end{bmatrix} \Rightarrow A = \begin{bmatrix} 4 & 2 \\ -1 & 1 \end{bmatrix}$

$Ax = b$ (general formula for equations).

- A: mpn matrix
- x: npl matrix → variables
- b: → npl matrix