Exercise sheet 12 for Math 263: ODEs for Engineers Matt Roberts
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Define

$$A = \begin{pmatrix} 0 & 1 & 2 \\ -1 & -2 & -2 \\ -4 & 4 & 7 \end{pmatrix}.$$

1. Find the general solution to

$$\frac{d\mathbf{x}}{dt} = A\mathbf{x}.$$

2. Find the solution to the initial value problem

$$\frac{d\mathbf{x}}{dt} = A\mathbf{x}, \quad \mathbf{x}(0) = \begin{pmatrix} 1 \\ 0 \\ 0 \end{pmatrix}.$$

If you spot any errors, please inform me: `matthew.roberts@mcgill.ca`