

1. [5pts] Use variation of parameters to find the general solution of $X' = \begin{pmatrix} 3 & -3 \\ 2 & -2 \end{pmatrix} X + \begin{pmatrix} 4 \\ -1 \end{pmatrix}$

2. [5pts] Use matrix exponential method to solve $X' = \begin{pmatrix} -4 & -2 \\ 8 & 4 \end{pmatrix} X$