1. (12 pts) Find the general solution (in real form) to the problem

\[ Y' = \begin{pmatrix} 3 & 2 \\ -4 & -1 \end{pmatrix} Y \]
2. (10 pts) Use Euler’s method with step size $h = 0.5$ to find an approximate value of $y(1)$ if $y$ is the solution of

$$y' = +y(1 + 3t^2)$$

with initial condition $y(0) = 1$