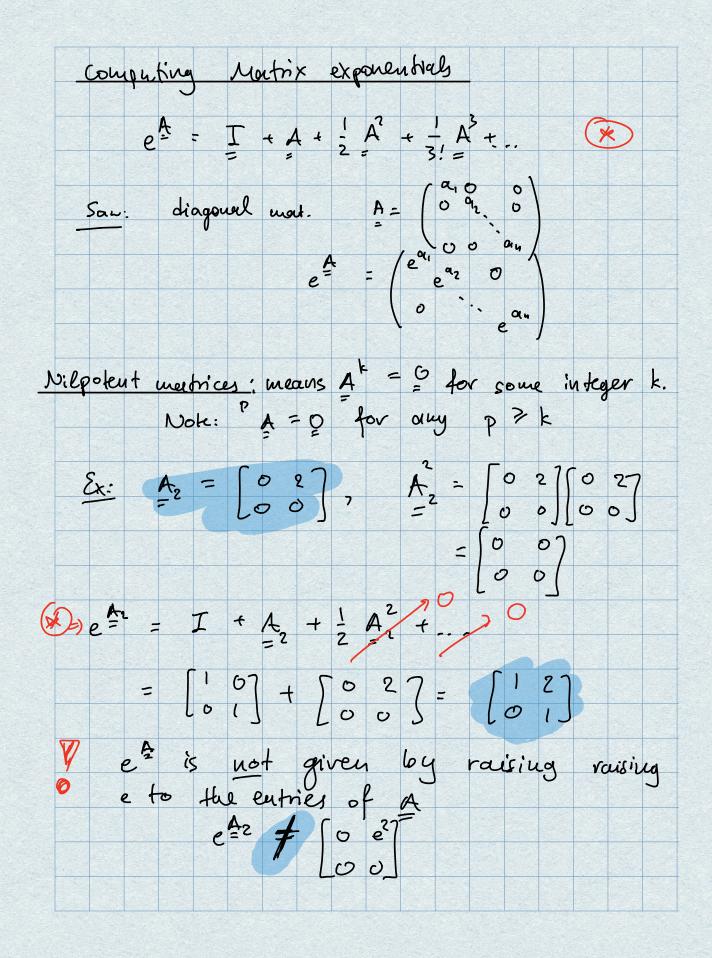
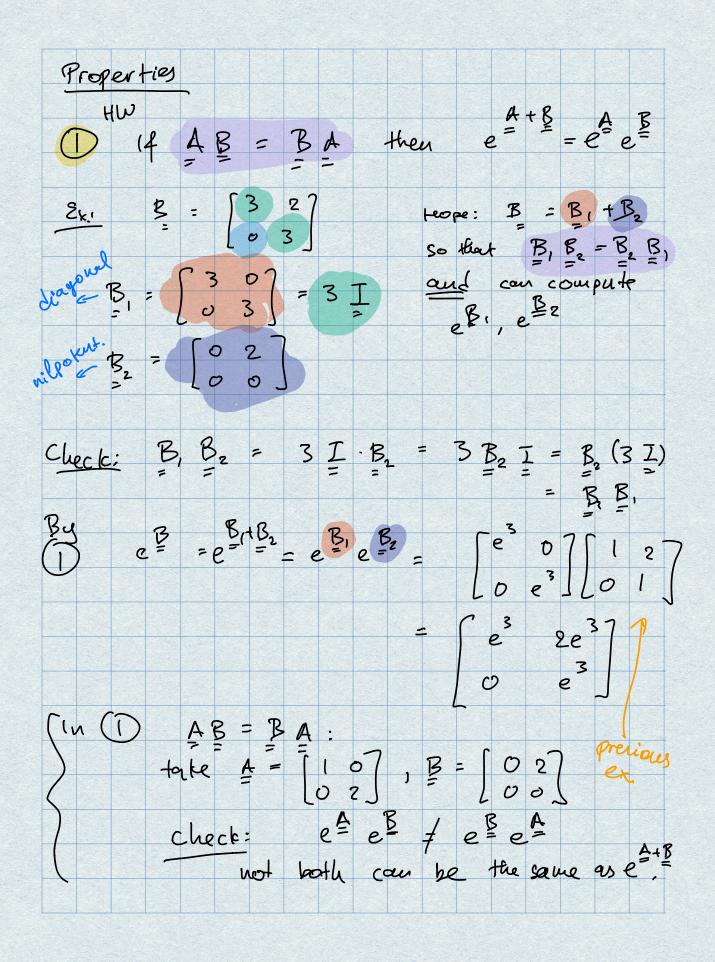
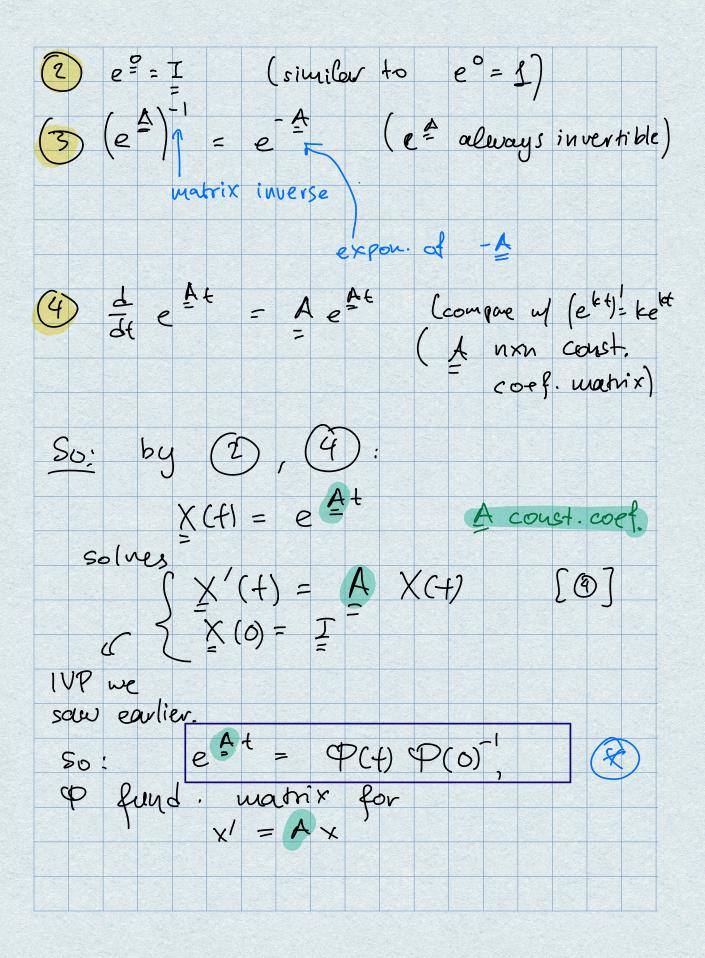
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So: $e^{\pm \frac{1}{2}} = \begin{bmatrix} -3e^{\frac{1}{2}} + 4e^{2\frac{1}{2}} & 4e^{\frac{1}{2}} - 4e^{\frac{1}{2}} \\ -3e^{\frac{1}{2}} + 3e^{\frac{1}{2}} & 4e^{\frac{1}{2}} - 3e^{\frac{1}{2}} \end{bmatrix}$ Method of computing et for complicated matrices: 1. solve $x' = A \times (A \times n \times n, const. coef.)$ 2. find n lin. indep. sols
3. arrange into matrix to find F. M. $\Phi(t)$.
4. $e^{At} = \Phi(t) \Phi'(0)$ 5.7 Don-homog. eys Geu. sol'u; $x = x_c(t) + x_p$ solu of x' = A(t) x) Undetermined Coefficients Want: A const. ceef. matrix

