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$$\phi(A) = \alpha_0 A^2 + \alpha_1 A + \alpha_2 I$$

$$\phi(A) = \alpha_0 A + \alpha_1 I$$

$$\phi(\lambda) = \alpha_0 + \alpha_1 \lambda$$

$$\lambda_1 = -1, \quad \lambda_2 = 2$$

$$\phi(1) = \alpha_0 + \alpha_1 = e^{-1}$$

$$\phi(2) = \alpha_0 + 2\alpha_1 = e^{2}$$

$$\alpha_1 = e^{2} - e^{-1}$$

$$\alpha_0 = 2e^{-1} - e^{2}$$

$$\phi(A) = (2e^{-1} - e^{2})I + (e^{2} - e^{-1})A$$

$$= \begin{bmatrix} 2e^{-1} - e^{2} & 0 \\ 0 & 2e^{-1} - e^{2} \end{bmatrix} + \begin{bmatrix} e^{2} - e^{-1} & 0 \\ 0 & e^{2} - e^{-1} \end{bmatrix}$$

$$= \begin{bmatrix} e^{-1} & 0 \\ 0 & e^{-1} \end{bmatrix}$$

$$P^{-1} A P = \begin{pmatrix} \lambda_1 & & \\ & -l_2 & \\ & & -l_3 \end{pmatrix}$$

$$A^n = M D^n M^{-1}$$

$$A^m \neq a_m$$

$$\phi(A) = \alpha_1 A + \alpha_0 I$$

$$\phi(A) = \alpha_2 A^2 + \alpha_1 A + \alpha_0$$

$$\phi(A^{50}) = \alpha_1 A + \alpha_0 I$$

$$\lambda^{50} = \alpha_1 \lambda + \alpha_0$$

Step 1 → $|A - \lambda I| =$

Step 2 : $\lambda =$

dist → ...

Step 3 :

λ_1 ... $g(A) = 2$

$|A - \lambda_1 I| \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix} = 0$

$x_1 = \frac{-x_2}{1} =$

$\varepsilon_r \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix} = \begin{bmatrix} \\ \\ \end{bmatrix}$

dist × $g(A) = 2$

$g(A) = 1$

$x_2 = $ ...