

$$W = A \cdot \begin{pmatrix} x_0 \\ \vdots \\ x_n \end{pmatrix} = \begin{pmatrix} 0 \\ \vdots \\ 0 \end{pmatrix}$$

Sia $P = \begin{pmatrix} x_0 \\ \vdots \\ x_n \end{pmatrix} \in W$

Mi chiedo, $P \in I_m$?

$$\begin{pmatrix} X_0 & \dots & X_n \end{pmatrix} \cdot \begin{pmatrix} A & \begin{pmatrix} X_0 \\ \vdots \\ X_n \end{pmatrix} \end{pmatrix} = 0$$

$$\begin{pmatrix} X_0 & \dots & X_n \end{pmatrix} \begin{pmatrix} 0 \\ \vdots \\ 0 \end{pmatrix} = 0$$

$$X_0^2 + 5X_1^2 + 6X_2^2 = 0 \quad \mathbb{P}^2$$

$$\begin{pmatrix} 1 & 0 & 0 \\ 0 & 5 & 0 \\ 0 & 0 & 6 \end{pmatrix}$$

$$X_0^2 + X_1^2 + X_2^2 = 0$$

$$\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$$

$$7X_0^2 + 7X_1^2 + 7X_2^2 = 0$$

$$\begin{pmatrix} 7 & 0 & 0 \\ 0 & 7 & 0 \\ 0 & 0 & 7 \end{pmatrix}$$