

$$\begin{matrix} m \\ \left\{ \begin{array}{c} \text{A} \end{array} \right\} \\ n \end{matrix} = \begin{matrix} m \\ \left\{ \begin{array}{c} \text{X} \end{array} \right\} \\ r \end{matrix} \times \begin{matrix} \left\{ \begin{array}{c} \text{Y}^{\text{T}} \end{array} \right\} \\ n \\ r \end{matrix}$$