

$$[1 \ 0 \ 3] \times \begin{bmatrix} 2 \\ -1 \\ -1 \end{bmatrix} \begin{bmatrix} 0 \\ 2 \\ 0 \end{bmatrix} \begin{bmatrix} -1 \\ 0 \\ 0 \end{bmatrix} \begin{bmatrix} 1 \\ 1 \\ 0 \end{bmatrix} = -1, 0, -1, -1$$



$$[1 \ 0 \ 3] \times \begin{bmatrix} 2 & 0 & -1 & 1 \\ -1 & 2 & 0 & 1 \\ -1 & 0 & 0 & 0 \end{bmatrix} = [-1 \ 0 \ -1 \ -1]$$

$$f(\mathbf{x}; \mathbf{W}) = \mathbf{W}\mathbf{x}$$