$$A = \begin{pmatrix} 2 \\ 1 \\ 1 \end{pmatrix}^{3 \times 1} \qquad B = \begin{pmatrix} -1 & 1 & 1 \end{pmatrix}^{1 \times 3} \qquad C = \begin{pmatrix} -1 & 1 \\ 1 & 1 \end{pmatrix}^{2 \times 2} \qquad D = \begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix}^{2 \times 2} \qquad E = \begin{pmatrix} -1 & 1 \\ 1 & 0 \\ 1 & 1 \end{pmatrix}^{3 \times 2}$$

A·B   si (3x3)

B·A   si (1x1)

C·D , D·C   si (2x2)   sono diverse

B·E   si   (1x2

C·E   no

EC   si   (3x2)

EC   si   (3x2)

$$A \cdot B = \begin{pmatrix} 2 \\ 1 \\ 1 \end{pmatrix} \begin{pmatrix} -1 & 1 & 1 \end{pmatrix} = \begin{pmatrix} -2 & 2 & 2 \\ -1 & 1 & 1 \\ -1 & 1 & 1 \end{pmatrix}^{3 \times 3}$$

$$B \cdot A = \begin{pmatrix} -1 & 1 & 1 \end{pmatrix} \begin{pmatrix} 2 \\ 1 \\ 1 \end{pmatrix} = \begin{pmatrix} -2 + 1 + 1 \end{pmatrix} = \begin{pmatrix} 0 \end{pmatrix}^{1 \times 1}$$

$$E \cdot C = \begin{pmatrix} -1 & 1 \\ 1 & 0 \\ 1 & 1 \end{pmatrix} \begin{pmatrix} -1 & 1 \\ 1 & 1 \end{pmatrix} = \begin{pmatrix} 2 & 0 \\ -1 & 1 \\ 0 & 2 \end{pmatrix}^{3 \times 2}$$