QUESTION
Evaluate the product **AB** of the matrices

$$\mathbf{A} = \begin{pmatrix} 2 & -1 \\ 1 & 2 \end{pmatrix}, \qquad \mathbf{B} = \begin{pmatrix} 0 & 1 & 2 \\ 1 & 3 & 1 \end{pmatrix}.$$

ANSWER

$$\mathrm{AB} = \begin{pmatrix} 2 & -1 \\ 1 & 2 \end{pmatrix} \begin{pmatrix} 0 & 1 & 2 \\ 1 & 3 & 1 \end{pmatrix} = \begin{pmatrix} 0-1 & 2-3 & 4-1 \\ 0+2 & 1+6 & 2+2 \end{pmatrix} = \begin{pmatrix} -1 & -1 & 3 \\ 2 & 7 & 4 \end{pmatrix}$$