

Exo 6 produits matriciels

AB

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

$$\begin{pmatrix} 8 & -1 & 6 \\ 4 & 2 & 0 \end{pmatrix}$$

A 3 colonnes \Rightarrow NON
B 4 lignes

2. $A = \begin{pmatrix} 45 & 2 & 1 \\ 2 & 16 & 7 \end{pmatrix}, B = \begin{pmatrix} 2 & 1 \\ 7 & 2 \\ 4 & 5 \\ 5 & 0 \end{pmatrix}.$

3. $A = \begin{pmatrix} 0 & 1 \\ -2 & 3 \\ 5 & 7 \end{pmatrix}, B = \begin{pmatrix} 1 & 1 \\ 1 & 0 \end{pmatrix}.$

$$\begin{pmatrix} 1 & 0 \\ 1 & -2 \\ 12 & 5 \end{pmatrix}$$

4. $A = \begin{pmatrix} 1 & 2 & 0 \\ -6 & 3 & 8 \\ 5 & 8 & 1 \end{pmatrix}, B = \begin{pmatrix} 1 & 1 \\ 1 & 0 \\ 0 & 1 \end{pmatrix}.$

$$\begin{pmatrix} 3 & 1 \\ -3 & 2 \\ 13 & 6 \end{pmatrix}$$

5. $A = \begin{pmatrix} 4 & 2 & 6 \\ 2 & 1 & 7 \end{pmatrix}, B = \begin{pmatrix} 2 & 1 \\ 3 & 4 \end{pmatrix}.$

A 3 colonnes \Rightarrow NON
B 2 lignes

6. $A = \begin{pmatrix} 4 & 2 & 2 & 0 \\ 12 & 1 & 7 & 1 \\ 3 & -1 & 0 & 0 \\ 0 & 2 & 2 & 2 \\ 0 & 0 & 0 & 0 \end{pmatrix}, B = \begin{pmatrix} 2 & 0 \\ 1 & 1 \\ 2 & 2 \\ 1 & 0 \end{pmatrix}.$

$$\begin{pmatrix} 14 & 6 \\ 40 & 15 \\ 5 & -1 \\ 8 & 6 \\ 0 & 0 \end{pmatrix}$$