Matrix Multiplication

Is it possible to multiply the matrices shown?

(a) $\begin{pmatrix}2\\0\\4\end{pmatrix} \times \begin{pmatrix}5 & -1\\4 & 0\end{pmatrix}$

(b) $\begin{pmatrix}-7 & 4\end{pmatrix} \times \begin{pmatrix}2\\6\end{pmatrix}$

(c) $\begin{pmatrix}1 & 0\\4 & -3\end{pmatrix} \times \begin{pmatrix}3 & 2 & 5\\6 & 0 & -1\end{pmatrix}$

Work out:

(a) $\begin{pmatrix}4\\2\end{pmatrix} \times \begin{pmatrix}-2 & 5\end{pmatrix}$

(b) $\begin{pmatrix}0 & 3\\2 & 5\end{pmatrix} \times \begin{pmatrix}-1 & 3\\0 & 6\end{pmatrix}$

(c) $\begin{pmatrix}4 & 7 & -2\end{pmatrix} \times \begin{pmatrix}0\\1\\5\end{pmatrix}$

(d) $\begin{pmatrix}1 & -2\\3 & 7\end{pmatrix} \times \begin{pmatrix}-1 & 4\\0 & -2\end{pmatrix}$

(e) $\begin{pmatrix}0 & 2\\-5 & 3\end{pmatrix} \times \begin{pmatrix}1 & 6\\-3 & 0\end{pmatrix}$

(f) $\begin{pmatrix}-2 & 1\\8 & 0\end{pmatrix} \times \begin{pmatrix}-3 & 5\\1 & 2\end{pmatrix}$

(a) Given that

$\begin{pmatrix}-2 & a\\-4 & 3\end{pmatrix}\begin{pmatrix}3\\7\end{pmatrix} = \begin{pmatrix}22\\9\end{pmatrix}$

work out the value of a.

(b) Matrix **P** = $\begin{pmatrix}2 & 3\\a & b\end{pmatrix}$

Matrix **Q** = $\begin{pmatrix}1 & 1\\0 & 1\end{pmatrix}$

You are given that **PQ** = **QP**. Work out the values of a and b.

Matrix Multiplication

Is it possible to multiply the matrices shown?

(a) $\begin{pmatrix}2\\0\\4\end{pmatrix} \times \begin{pmatrix}5 & -1\\4 & 0\end{pmatrix}$

(b) $\begin{pmatrix}-7 & 4\end{pmatrix} \times \begin{pmatrix}2\\6\end{pmatrix}$

(c) $\begin{pmatrix}1 & 0\\4 & -3\end{pmatrix} \times \begin{pmatrix}3 & 2 & 5\\6 & 0 & -1\end{pmatrix}$

Work out:

(a) $\begin{pmatrix}4\\2\end{pmatrix} \times \begin{pmatrix}-2 & 5\end{pmatrix}$

(b) $\begin{pmatrix}0 & 3\\2 & 5\end{pmatrix} \times \begin{pmatrix}-1 & 3\\0 & 6\end{pmatrix}$

(c) $\begin{pmatrix}4 & 7 & -2\end{pmatrix} \times \begin{pmatrix}0\\1\\5\end{pmatrix}$

(d) $\begin{pmatrix}1 & -2\\3 & 7\end{pmatrix} \times \begin{pmatrix}-1 & 4\\0 & -2\end{pmatrix}$

(e) $\begin{pmatrix}0 & 2\\-5 & 3\end{pmatrix} \times \begin{pmatrix}1 & 6\\-3 & 0\end{pmatrix}$

(f) $\begin{pmatrix}-2 & 1\\8 & 0\end{pmatrix} \times \begin{pmatrix}-3 & 5\\1 & 2\end{pmatrix}$

(a) Given that

$\begin{pmatrix}-2 & a\\-4 & 3\end{pmatrix}\begin{pmatrix}3\\7\end{pmatrix} = \begin{pmatrix}22\\9\end{pmatrix}$

work out the value of a.

(b) Matrix **P** = $\begin{pmatrix}2 & 3\\a & b\end{pmatrix}$

Matrix **Q** = $\begin{pmatrix}1 & 1\\0 & 1\end{pmatrix}$

You are given that **PQ** = **QP**. Work out the values of a and b.