

Fill in the Blanks

Matrix Multiplication

Question	Working		Answer
$\begin{pmatrix} 3 & 0 \\ 1 & 4 \end{pmatrix} \times \begin{pmatrix} 2 & 1 \\ 5 & 0 \end{pmatrix}$	$3 \times 2 + 0 \times 5$	$3 \times 1 + 0 \times 0$	$\begin{pmatrix} 6 & 3 \\ 22 & 1 \end{pmatrix}$
	$1 \times 2 + 4 \times 5$	$1 \times 1 + 4 \times 0$	
$\begin{pmatrix} 4 & 2 \\ 3 & 0 \end{pmatrix} \times \begin{pmatrix} 7 & 0 \\ 1 & 1 \end{pmatrix}$	$4 \times 7 + 2 \times 1$	$4 \times 0 + 2 \times 1$	$\begin{pmatrix} 30 & 2 \\ 21 & 0 \end{pmatrix}$
	$3 \times 7 + 0 \times 1$	$3 \times 0 + 0 \times 1$	
$\begin{pmatrix} 2 & -1 \\ 1 & 3 \end{pmatrix} \times \begin{pmatrix} 0 & 4 \\ 2 & 1 \end{pmatrix}$	$2 \times 0 - 1 \times 2$	$2 \times 4 - 1 \times 1$	$\begin{pmatrix} -2 & 7 \\ 6 & 7 \end{pmatrix}$
	$1 \times 0 + 3 \times 2$	$1 \times 4 + 3 \times 1$	
$\begin{pmatrix} -3 & 1 \\ -2 & 0 \end{pmatrix} \times \begin{pmatrix} 0 & -1 \\ 4 & 1 \end{pmatrix}$	$-3 \times 0 + 1 \times 4$	$-3 \times -1 + 1 \times 1$	$\begin{pmatrix} 4 & 4 \\ 0 & 2 \end{pmatrix}$
	$-2 \times 0 + 0 \times 4$	$-2 \times -1 + 0 \times 1$	
$\begin{pmatrix} 1.5 & 0 \\ -3 & 2 \end{pmatrix} \times \begin{pmatrix} 4 & 0.5 \\ 2 & -1 \end{pmatrix}$	$1.5 \times 4 + 0 \times 2$	$1.5 \times 0.5 + 0 \times -1$	$\begin{pmatrix} 6 & 0.75 \\ -8 & -3.5 \end{pmatrix}$
	$-3 \times 4 + 2 \times 2$	$-3 \times 0.5 + 2 \times -1$	
$\begin{pmatrix} 3 & -2 \\ \frac{3}{4} & 0 \end{pmatrix} \times \begin{pmatrix} -1 & \frac{2}{3} \\ 4 & 2 \end{pmatrix}$	$\frac{3}{4} \times -1 - 2 \times 4$	$\frac{3}{4} \times \frac{2}{3} - 2 \times 2$	$\begin{pmatrix} -\frac{35}{4} & -\frac{7}{2} \\ 12 & 6 \end{pmatrix}$
	$0 \times -1 + 3 \times 4$	$0 \times \frac{2}{3} + 3 \times 2$	
$\begin{pmatrix} 1 & \sqrt{3} \\ -2 & 0 \end{pmatrix} \times \begin{pmatrix} -2 & 0 \\ \sqrt{3} & 4 \end{pmatrix}$	$1 \times -2 + \sqrt{3} \times \sqrt{3}$	$1 \times 0 + \sqrt{3} \times 4$	$\begin{pmatrix} 1 & 4\sqrt{3} \\ 4 & 0 \end{pmatrix}$
	$-2 \times -2 + 0 \times \sqrt{3}$	$-2 \times 0 + 0 \times 4$	
$\begin{pmatrix} 4 & 1 \\ 0 & 2 \end{pmatrix} \times \begin{pmatrix} 2 & 1 \\ 3 & 5 \end{pmatrix}$	$4 \times 2 + 1 \times 3$	$4 \times 1 + 1 \times 5$	$\begin{pmatrix} 11 & 9 \\ 6 & 10 \end{pmatrix}$
	$0 \times 2 + 2 \times 3$	$0 \times 1 + 2 \times 5$	
$\begin{pmatrix} -1 & 5 \\ 3 & 1 \end{pmatrix} \times \begin{pmatrix} 2 & -1 \\ 1 & 3 \end{pmatrix}$	$-1 \times 2 + 5 \times 1$	$-1 \times -1 + 5 \times 3$	$\begin{pmatrix} 3 & 16 \\ 7 & 0 \end{pmatrix}$
	$3 \times 2 + 1 \times 1$	$3 \times -1 + 1 \times 3$	