Non-square matrix multiplication

5/5 points (100%)

Practice Quiz, 5 questions

✔ **Congratulations! You passed!**

<div style="border">Next Item</div>

✔ 1 / 1 points

1.

In this quiz, you will practice multiplying together matrices which are not square.

Calculate the product:

$$\begin{bmatrix} 2 & 4 & 5 & 6 \end{bmatrix} \begin{bmatrix} 1 \\ 3 \\ 2 \\ 1 \end{bmatrix}$$

○ 29

◉ 30

Correct
This is another way to define the scalar product of two vectors!

○ 31

○ 32

✔ 1 / 1 points

2.

Calculate the product:

Non-square matrix multiplication

Practice Quiz, 5 questions

5/5 points (100%)

$$\begin{bmatrix} 3 \\ 2 \\ 1 \end{bmatrix} \begin{bmatrix} 2 & 4 & 5 & 6 \end{bmatrix}$$

○   30

○ $\begin{bmatrix} 2 & 4 & 5 & 6 \\ 6 & 15 & 12 & 18 \\ 8 & 4 & 12 & 10 \\ 2 & 4 & 6 & 5 \end{bmatrix}$

○   32

◉ $\begin{bmatrix} 2 & 4 & 5 & 6 \\ 6 & 12 & 15 & 18 \\ 4 & 8 & 10 & 12 \\ 2 & 4 & 5 & 6 \end{bmatrix}$

▲

Correct
Well done.

✔   1 / 1
     points

3.
Calculate the product:

$$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 0 & 1 \end{bmatrix} \begin{bmatrix} 1 & 1 & 0 \\ 0 & 1 & 1 \\ 1 & 0 & 1 \end{bmatrix}$$

○ $\begin{bmatrix} 5 & 4 & 3 \\ 1 & 4 & 5 \end{bmatrix}$

○ $\begin{bmatrix} 1 & 4 & 3 \\ 5 & 4 & 1 \end{bmatrix}$

○ $\begin{bmatrix} 3 & 5 & 4 \\ 4 & 1 & 5 \end{bmatrix}$

◉ $\begin{bmatrix} 4 & 3 & 5 \\ 5 & 4 & 1 \end{bmatrix}$

▲

Correct

Well done!

Non-square matrix multiplication

5/5 points (100%)

Practice Quiz, 5 questions

✔

1 / 1
points

4.

Calculate the product:

$$\begin{bmatrix} 2 & -1 \\ 0 & 3 \\ 1 & 0 \end{bmatrix} \begin{bmatrix} 0 & 1 & 4 & -1 \\ -2 & 0 & 0 & 2 \end{bmatrix}$$

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

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

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

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

▲

Correct
Well done!

✔

1 / 1
points

5.

Calculate the product:

$$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix} \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix}$$

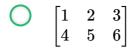○ $\begin{bmatrix} 1 & 3 & 5 \\ 2 & 4 & 6 \end{bmatrix}$

○

$$\begin{bmatrix} 5 & 1 & 6 \\ 4 & 3 & 2 \end{bmatrix}$$

Non-square matrix multiplication

5/5 points (100%)

Practice Quiz, 5 questions

$$\begin{bmatrix} 6 & 1 & 3 \\ 4 & 5 & 2 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix}$$

Correct
Well done!