

# Non-square matrix multiplication

Practice Quiz, 5 questions

5/5 points (100%)



**Congratulations! You passed!**

Next Item



1 / 1  
point

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  
point

2.

Calculate the product:

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



30



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



**Correct**

Well done.



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



32



1 / 1  
point

3.

Calculate the product:

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



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



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



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



**Correct**

Well done!

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1 / 1  
point

4.

Calculate the product:

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



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



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



**Correct**

Well done!



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



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



1 / 1  
point

5.

Calculate the product:

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



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



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**Correct**

Well done!

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

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

