



Determine whether two matrices can be multiplied

1 Is the matrix product AB defined?

A is a (2×2) matrix

[6pt] B is a (2×4) matrix

A

No

B

Yes

2 Is the matrix product AB defined?

$$A = \begin{bmatrix} -2 & -1 \\ -3 & 1 \\ 8 & 9 \\ 4 & -4 \end{bmatrix}$$

$$[8pt] B = \begin{bmatrix} -5 & 9 & -6 \\ -4 & -9 & -7 \end{bmatrix}$$

A

Yes

B

No

3 What are the dimensions of the matrix product AB ?

A is a (3×2) matrix

[6pt] B is a (2×4) matrix

A

 (3×4)

B

 (3×2)

C

 (4×3)

D

 (2×4)

4 What are the dimensions of the matrix product AB ?

$$A = \begin{bmatrix} 1 & 0 & -3 \\ 6 & -7 & -4 \end{bmatrix}$$

$$[8pt] B = \begin{bmatrix} 7 & 8 \\ 5 & 4 \\ -8 & -7 \end{bmatrix}$$

A

 (2×3)

B

 (2×2)

C

 (3×2)

D

[undefined]

6 Is the matrix product AB defined?

$$A = \begin{bmatrix} 6 & 2 & -7 \\ -8 & -3 & -9 \end{bmatrix}$$

$$[8pt] B = \begin{bmatrix} -5 & -9 \\ -8 & 8 \end{bmatrix}$$

A

No

B

Yes