

Topic: Matrix dimensions and entries**Question:** Give the dimensions of the matrix.

$$K = \begin{bmatrix} 1 & 0 & -1 & 3 \\ 2 & 5 & 6 & -2 \end{bmatrix}$$

Answer choices:

- A The dimensions are 4×2
- B The dimensions are 1×8
- C The dimensions are 2×4
- D The dimensions are 3×3



Solution: C

We always give the dimensions of a matrix as rows \times columns. Matrix K has 2 rows and 4 columns, so K is a 2×4 matrix.



Topic: Matrix dimensions and entries**Question:** Given matrix B , find $b_{2,1}$.

$$B = \begin{bmatrix} 1 & 3 \\ 0 & -1 \end{bmatrix}$$

Answer choices:

A 1

B 0

C -1

D 3



Solution: B

The value of $b_{2,1}$ is the entry in the second row, first column of matrix B , which is 0, so $b_{2,1} = 0$.



Topic: Matrix dimensions and entries

Question: Give the dimensions of matrix M and find $M_{3,2}$.

$$M = \begin{bmatrix} 1 & 3 & 7 \\ 0 & -1 & 2 \\ 9 & 4 & 6 \end{bmatrix}$$

Answer choices:

- A The dimensions are 3×3 and $M_{3,2} = 4$
- B The dimensions are 2×3 and $M_{3,2} = 2$
- C The dimensions are 3×3 and $M_{3,2} = 2$
- D The dimensions are 3×1 and $M_{3,2} = 4$



Solution: A

We always give the dimensions of a matrix as rows \times columns. Matrix M has 3 rows and 3 columns, so M is a 3×3 matrix.

The value of $M_{3,2}$ is the entry in the third row, second column of matrix M , which is 4, so $M_{3,2} = 4$.

