



# Introduction to matrices

Student name: \_\_\_\_\_ Score: \_\_\_\_\_

1. Let  $A$  be a  $2 \times 2$  matrix and  $B$  an  $m \times n$  matrix, where  $A = \begin{pmatrix} -2 & 0 \\ 1 & 3 \end{pmatrix}$  and  $B = \begin{pmatrix} 1 & 0 & 3 \\ -1 & 3 & 0 \end{pmatrix}$ .

Write down the value of  $m$  and of  $n$ .

2. Write down the order of each matrix in the column for the order and tick the appropriate column for the type of matrix

|     |                                                                                                     | Order | Column Matrix | Row matrix | Square matrix |
|-----|-----------------------------------------------------------------------------------------------------|-------|---------------|------------|---------------|
| (a) | $\begin{pmatrix} 8 & -1 & 3 \\ 0 & 0 & 2 \\ 10 & 4 & -3 \end{pmatrix}$                              |       |               |            |               |
| (b) | $(9 \quad -5 \quad 7 \quad 0)$                                                                      |       |               |            |               |
| (c) | $\begin{pmatrix} -2 & 0 & 4 & 6 & 3 \\ 1 & 1 & -5 & -9 & 8 \\ 7 & 3 & 2 & 7 & 6 \end{pmatrix}$      |       |               |            |               |
| (d) | $\begin{pmatrix} 1 & -1 \\ 0 & 2 \end{pmatrix}$                                                     |       |               |            |               |
| (e) | $\begin{pmatrix} -9 \\ 7 \\ 0 \\ 6 \end{pmatrix}$                                                   |       |               |            |               |
| (f) | $\begin{pmatrix} 8 & 2 \\ 1 & 5 \\ 0 & -3 \end{pmatrix}$                                            |       |               |            |               |
| (g) | $\begin{pmatrix} 0 & 5 & 0 & -6 \\ -1 & 2 & 3 & 4 \\ 2 & 0 & 5 & 3 \\ 8 & -5 & 1 & 3 \end{pmatrix}$ |       |               |            |               |





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Student name: \_\_\_\_\_ **ANSWERS** Score: \_\_\_\_\_

1. Let  $A$  be a  $2 \times 2$  matrix and  $B$  an  $m \times n$  matrix, where  $A = \begin{pmatrix} -2 & 0 \\ 1 & 3 \end{pmatrix}$  and  $B = \begin{pmatrix} 1 & 0 & 3 \\ -1 & 3 & 0 \end{pmatrix}$ .

Write down the value of  $m$  and of  $n$ .  $m = 2; n = 3$

2. Write down the order of each matrix in the column for the order and tick the appropriate column for the type of matrix

|     |                                                                                                     | Order        | Column Matrix | Row matrix | Square matrix |
|-----|-----------------------------------------------------------------------------------------------------|--------------|---------------|------------|---------------|
| (a) | $\begin{pmatrix} 8 & -1 & 3 \\ 0 & 0 & 2 \\ 10 & 4 & -3 \end{pmatrix}$                              | $3 \times 3$ |               |            | ✓             |
| (b) | $(9 \quad -5 \quad 7 \quad 0)$                                                                      | $1 \times 4$ |               | ✓          |               |
| (c) | $\begin{pmatrix} -2 & 0 & 4 & 6 & 3 \\ 1 & 1 & -5 & -9 & 8 \\ 7 & 3 & 2 & 7 & 6 \end{pmatrix}$      | $3 \times 5$ |               |            |               |
| (d) | $\begin{pmatrix} 1 & -1 \\ 0 & 2 \end{pmatrix}$                                                     | $2 \times 2$ |               |            |               |
| (e) | $\begin{pmatrix} -9 \\ 7 \\ 0 \\ 6 \end{pmatrix}$                                                   | $4 \times 1$ | ✓             |            |               |
| (f) | $\begin{pmatrix} 8 & 2 \\ 1 & 5 \\ 0 & -3 \end{pmatrix}$                                            | $3 \times 3$ |               |            | ✓             |
| (g) | $\begin{pmatrix} 0 & 5 & 0 & -6 \\ -1 & 2 & 3 & 4 \\ 2 & 0 & 5 & 3 \\ 8 & -5 & 1 & 3 \end{pmatrix}$ | $4 \times 4$ |               |            | ✓             |