

MATRICES HOMEWORK – HOMEWORK: INTRODUCTION TO MATRICES*

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Abstract

This module provides practice problems which develop concepts related to matrices.

Exercise 1

In the following matrix...

$$\begin{bmatrix} 1 & 3 & 7 & 4 & 9 & 3 \\ 6 & 3 & 7 & 0 & 8 & 1 \\ 8 & 5 & 0 & 7 & 3 & 2 \\ 8 & 9 & 5 & 4 & 3 & 0 \\ 6 & 7 & 4 & 2 & 9 & 1 \end{bmatrix}$$

- What are the dimensions? $__ \times __$
- Copy the second column here:
- Copy the third row here:
- Write another matrix which is equal to this matrix.

Exercise 2

Add the following two matrices.

$$\begin{bmatrix} 2 & 6 & 4 \\ 9 & n & 8 \end{bmatrix} + \begin{bmatrix} 5 & 7 & 1 \\ 9 & -n & 3n \end{bmatrix} =$$

Exercise 3

Add the following two matrices.

$$\begin{bmatrix} 2 & 6 & 4 \\ 9 & n & 8 \end{bmatrix} + \begin{bmatrix} 5 & 7 \\ 9 & -n \end{bmatrix} =$$

Exercise 4

Subtract the following two matrices.

$$\begin{bmatrix} 2 & 6 & 4 \\ 9 & n & 8 \end{bmatrix} - \begin{bmatrix} 5 & 7 & 1 \\ 9 & -n & 3n \end{bmatrix} =$$

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Exercise 5

Solve the following equation for x and y . (That is, find what x and y must be for this equation to be true.)

$$\begin{bmatrix} 2x \\ 5y \end{bmatrix} + \begin{bmatrix} x + y \\ -6x \end{bmatrix} = \begin{bmatrix} 6 \\ 2 \end{bmatrix}$$

Exercise 6

Solve the following equation for x and y . (That is, find what x and y must be for this equation to be true.)

$$\begin{bmatrix} x + y \\ 3x - 2y \end{bmatrix} + \begin{bmatrix} 4x - y \\ x + 5y \end{bmatrix} = \begin{bmatrix} 3 & 5 \\ 7 & 9 \end{bmatrix}$$