Congratulations! You passed!

Grade received 100% To pass 80% or higher

Go to next iten

1/1 point

1/1 point

1. What is the mean of the dataset $\mathcal{D}=\{1,2,3\}$?

Do the exercises using pen and paper.

- O 6
- 2
- O 3

2. Compute the mean of the following dataset:

 $\mathcal{D} = \left\{ \begin{bmatrix} 1\\4\\5 \end{bmatrix}, \begin{bmatrix} 2\\5\\6 \end{bmatrix}, \begin{bmatrix} 3\\6\\0 \end{bmatrix} \right\}$

Do the exercises using pen and paper.

- $\bigcirc \begin{bmatrix} 6 \\ 15 \\ 24 \end{bmatrix}$
- \[
 \begin{array}{c}
 2 \\
 5 \\
 0
 \end{array}
 \]
- $\begin{bmatrix}
 -2 \\
 -5 \\
 -8
 \end{bmatrix}$

✓ Correct
 Well done!

1/1 point

- $\mathcal{D} = \left\{ \begin{bmatrix} 2\\3 \end{bmatrix}, \begin{bmatrix} 4\\5 \end{bmatrix}, \begin{bmatrix} 3\\1 \end{bmatrix} \right\}$
- $\bigcirc \begin{bmatrix} 3 \\ 3 \\ 3 \end{bmatrix}$
- $\begin{bmatrix}
 18 \\
 18 \\
 18 \\
 18
 \end{bmatrix}$
- ✓ Correct
 Well done!
- 4. What is the mean of the following dataset, **after** adding $\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$ to each sample in the following dataset?

1/1 point

1/1 point

- $\mathcal{D} = \left\{ \begin{bmatrix} 1\\2\\3 \end{bmatrix}, \begin{bmatrix} 3\\4\\5 \end{bmatrix}, \begin{bmatrix} 5\\3\\1 \end{bmatrix} \right\}$
- $\begin{bmatrix}
 2 \\
 1 \\
 0
 \end{bmatrix}$
- $\begin{bmatrix}
 3 \\
 3 \\
 3
 \end{bmatrix}$
- Ocrrect
 Well done!
- 5. Assuming that we know the mean \bar{x}_{n-1} of a dataset \mathcal{D}_{n-1} with n-1 data points. Now, suppose that we collect another data point, which we denote by x_* . Select the correct formula that computes the correct new mean \bar{x}_n of the full data set $\mathcal{D}_n = \mathcal{D}_{n-1} \cup \{x_*\}$, i.e., we add x_* to the dataset \mathcal{D} .

 $\bigcirc \ \bar{x}_n = \bar{x}_{n-1} + \frac{1}{n-1}(x_* - \bar{x}_{n-1})$

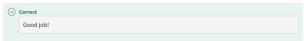
- $\bigcirc \ ar{x}_n = ar{x}_{n-1} + rac{1}{n+1}(x_* ar{x}_{n-1})$
- $igcap ar{x}_n = ar{x}_{n-1} + rac{1}{n+1} (ar{x}_{n-1} x_*)$

Ocrrect
Excellent!

6. Assuming you are given an image as a two dimensional array of shape 28 x 28. Write a small piece of python code to reshape this image to a vector of length 784 (=28 x 28).

Hint: This can be a one-liner.





1/1 point