

Indexing and arithmetic

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Scalar = `np.array(6)` → one square bracket

Vectors = `np.array([1, 2, 3])` → 1 square bracket

Matrix = `np.array([[1, 2], [2, 3]])` - 2 square brackets

Tensors = `np.array([[[1, 2], [2, 3]]])` - 3 square brackets

Inbuilt fns exist to make it easier to create tensors

`x = np.zeros((2, 2)) ; np.ones((2, 2))`

`np.eye(2)`
↑ double brackets

→ Possible to index and perform basic arithmetic just like list.

`x = np.array([[1, 2], [3, 4]])`
`y = np.array([[1, 2], [3, 4]])`
`x + y = $\begin{bmatrix} 2 & 4 \\ 6 & 8 \end{bmatrix}$`