# ✓ Congratulations! You passed!

Next Item



1/1 point

1.

Compute the length of  $\mathbf{x}=\begin{bmatrix}1\\-1\\3\end{bmatrix}$  using the dot product. Do the exercises using pen and paper.

- 3
- $\sqrt{3}$
- $\sqrt{11}$

### Correct

Well done!

- $\sqrt{5}$
- $\sqrt{13}$
- 11

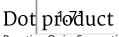


1/1 point

2.

Compute the angle (in rad) between  $\mathbf{x} = \begin{bmatrix} 3 \\ 4 \end{bmatrix}$  and  $\mathbf{y} = \begin{bmatrix} 1 \\ -1 \end{bmatrix}$  using the dot product. Do the exercises using pen and paper, but you will need a calculator at some point.

When you are asked to enter numerical answers, please use decimal numbers (e.g., 1.4 or 1.41 instead of  $\sqrt{2}$ )



Practice Quiz, 5 questions

## **Correct Response**

Good job!



1/1 point

3.

Compute the distance between  $\mathbf{x} = \begin{bmatrix} 3 \\ 4 \end{bmatrix}$  and  $\mathbf{y} = \begin{bmatrix} 1 \\ -1 \end{bmatrix}$ . Do the exercises using pen and paper. Enter your answer as a decimal number (calculator is fine to get it).

5.39

#### **Correct Response**



1/1 point

4.

Write a piece of code that computes the length of a given vector x.

```
import numpy as np

def length(x):
    """Compute the length of a vector"""

length_x = np.linalg.norm(x) # <--- compute the length of a vector x here.

Run
return length_x

print(length(np.array([1,0])))</pre>
Reset
```

## **Correct Response**

Good job!



1/1 point

Practice Quiz 
$$\begin{bmatrix} \mathbf{q} \ \mathbf{q} \end{bmatrix}$$
 uestions  $\mathbf{x} = \begin{bmatrix} -1 \\ 2 \\ 3 \end{bmatrix}, \quad \mathbf{y} = \begin{bmatrix} -1 \\ 0 \\ 8 \end{bmatrix}$ 

Compute the angle (in rad) between  ${f x}$  and  ${f x}-{f y}$ .

Do the exercises using pen and paper, but you will need a calculator at some point.

2.00

**Correct Response** 



