Tarea12

Cristian Sáez Mardones

08-12-2020

```
import numpy as np

def print_vector_info(v):
    x, y = v
    print(f'Componentes: {v}')
    print("Módulo: {}".format(np.linalg.norm(v)))
    print("Sentido: {}".format(round(np.degrees(np.arctan2(y, x)), 2)))
    print('-'*10)
```

1.

```
A = np.array([0, 0])
points = [(4, 2), (2, -6), (-4, 3), (0, 5),(-4, 0), (-3, 5), (0, -3), (4, -3), (2, 5), (-7, -3)]

for i, point in enumerate(points, 1):
    AB = np.array(point) - A
    print(f'Vector {i}')
    print_vector_info(AB)
```

```
## Vector 1
## Componentes: [4 2]
## Módulo: 4.47213595499958
## Sentido: 26.57
## ----------
## Vector 2
## Componentes: [ 2 -6]
## Módulo: 6.324555320336759
## Sentido: -71.57
## ----------
## Vector 3
## Componentes: [-4  3]
## Módulo: 5.0
## Sentido: 143.13
## ----------
## Vector 4
## Componentes: [0 5]
## Módulo: 5.0
## Sentido: 90.0
## ----------
## Vector 5
## Componentes: [-4  0]
## Módulo: 4.0
## Sentido: 180.0
```

```
## ----------
## Vector 6
## Componentes: [-3  5]
## Módulo: 5.830951894845301
## Sentido: 120.96
## ----------
## Vector 7
## Componentes: [ 0 -3]
## Módulo: 3.0
## Sentido: -90.0
## ----------
## Vector 8
## Componentes: [ 4 -3]
## Módulo: 5.0
## Sentido: -36.87
## ----------
## Vector 9
## Componentes: [2 5]
## Módulo: 5.385164807134504
## Sentido: 68.2
## ----------
## Vector 10
## Componentes: [-7 -3]
## Módulo: 7.615773105863909
## Sentido: -156.8
## ----------
```