# e-3

March 11, 2025

[1]:
```
import numpy as np
```

[5]:
```
np.eye(5)        #5x5 array of 0 with 1 on diagonal (Identity matrix)
```

[5]:
```
array([[1., 0., 0., 0., 0.],
       [0., 1., 0., 0., 0.],
       [0., 0., 1., 0., 0.],
       [0., 0., 0., 1., 0.],
       [0., 0., 0., 0., 1.]])
```

[6]:
```
p = ([100, 2500, 4000], [5, 6, 7])
```

[7]:
```
np.empty_like(p)
```

[7]:
```
array([[28429264711581742, 28429397856419958, 32088563961561180],
       [32370073299845220, 30399774231756907, 14355657611083893]])
```

[12]:
```
np.empty((1, 3))
```

[12]:
```
array([[8.45591075e-312, 0.00000000e+000, 5.66252743e-249]])
```

[13]:
```
np.arange(0,10,3) #Array of values from 0 to less than 10 with step 3 (eg␣
↪[0,3,6,9])
```

[13]:
```
array([0, 3, 6, 9])
```

[14]:
```
np.full((2,3),8)        #2x3 array with all values 8
```

[14]:
```
array([[8, 8, 8],
       [8, 8, 8]])
```

[15]:
```
np.ones((3,4)) #3x4 array with all values 1
```

[15]:
```
array([[1., 1., 1., 1.],
       [1., 1., 1., 1.],
       [1., 1., 1., 1.]])
```

[16]:
```
np.zeros(3) #1D array of length 3 all values 0
```

[16]:
```
array([0., 0., 0.])
```

[ ]:
```

```