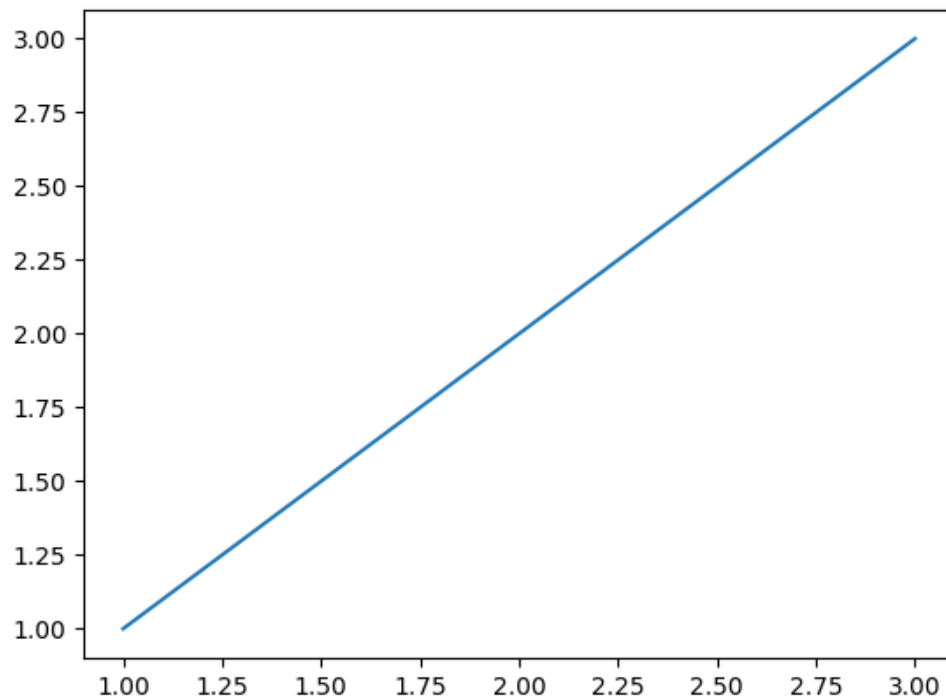# ex3_vladi

April 11, 2025

```python
[2]: import numpy as np
     import matplotlib.pyplot as plt
     from astropy.io import fits
     from astropy.table import Table
     from astropy import units as u
     plt.ion()
     import os
     %matplotlib widget
```

0.0.1 Test interactive plot

```python
[3]: plt.plot([1,2,3], [1,2,3])
```

```
[3]: [<matplotlib.lines.Line2D at 0x735d0bf32920>]
```

$x = sin(y)$

$E = mc^2$

```
[4]: s = [1,4,5,8]
```

```
[5]: r = 4 + s[2]
     print(r)
```

```
9
```

```
[6]: e = "Vladi " + "Irincheva"
     print(e)
```

```
Vladi Irincheva
```

```
[7]: e += "!"
```

```
[8]: print(e)
```

```
Vladi Irincheva!
```

```
[9]:  f = e.upper()
      print(f)
      l = e.lower()
      print(l)
```

```
VLADI IRINCHEVA!
vladi irincheva!
```

```
[10]:  n1 = f.split(" ")[0]
       n2 = f.split(" ")[1].split("!")[0]
       print(n1)
       print(n2)
```

```
VLADI
IRINCHEVA
```

```
[11]:  whole = e.split("!")[0]
       print(whole)
```

```
Vladi Irincheva
```

```
[12]:  n3 = n1 + " P. " + n2
       print(n3)
```

```
VLADI P. IRINCHEVA
```

```
[13]:  l1 = [4, 5.5, "home"]
```

```
[14]:  l1[0]
```

```
[14]:  4
```

```
[15]:  l1[2][2]
```

```
[15]:  'm'
```

```
[16]:  l1[1] = 16
       print(l1)
```

```
[4, 16, 'home']
```

```
[17]:  l1.append("school")
       print(l1)
```

```
[4, 16, 'home', 'school']
```

```
[18]:  l1.insert(1, 7)
       print(l1)
```

```
l1.pop(1)
print(l1)
```

```
[4, 7, 16, 'home', 'school']
[4, 16, 'home', 'school']
```

[19]:
```
l1.remove("school")
print(l1)
```

```
[4, 16, 'home']
```

[20]:
```
l1.append("hello")
l1.append(3)
print(l1)
l1.remove("hello")
l1.pop(3)
print(l1)
```

```
[4, 16, 'home', 'hello', 3]
[4, 16, 'home']
```

[21]:
```
l1[-1]
```

[21]: 'home'

[22]:
```
l1[-2]
```

[22]: 16

[23]:
```
g = 3.4
k = int(g)
print(type(k))
print(type(g))
print(type(l1[1]))
w = int(round(5.9))+int(4.3)
print(w)
```

```
<class 'int'>
<class 'float'>
<class 'int'>
10
```

[24]:
```
print("The result is", w, "My name is", n3)
print("The result is " + str(w))
```

```
The result is 10 My name is VLADI P. IRINCHEVA
The result is 10
```

```python
[25]: print(n3.lower())
```

vladi p. irincheva

```python
[ ]:
```