

```
In [1]: !pip install matplotlib
```

```

Defaulting to user installation because normal site-packages is not writeable
Collecting matplotlib
  Downloading matplotlib-3.9.3-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata (11 kB)
Collecting contourpy>=1.0.1 (from matplotlib)
  Downloading contourpy-1.3.1-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata (5.4 kB)
Collecting cycler>=0.10 (from matplotlib)
  Downloading cycler-0.12.1-py3-none-any.whl.metadata (3.8 kB)
Collecting fonttools>=4.22.0 (from matplotlib)
  Downloading fonttools-4.55.3-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata (165 kB)
    _____ 165.1/165.1 kB 2.0 MB/s eta
0:00:0000:0100:01
Collecting kiwisolver>=1.3.1 (from matplotlib)
  Downloading kiwisolver-1.4.7-cp310-cp310-manylinux_2_12_x86_64.manylinux2010_x86_64.whl.metadata (6.3 kB)
Requirement already satisfied: numpy>=1.23 in ./local/lib/python3.10/site-packages (from matplotlib) (2.1.3)
Requirement already satisfied: packaging>=20.0 in /opt/tljh/user/lib/python3.10/site-packages (from matplotlib) (24.0)
Collecting pillow>=8 (from matplotlib)
  Downloading pillow-11.0.0-cp310-cp310-manylinux_2_28_x86_64.whl.metadata (9.1 kB)
Collecting pyparsing>=2.3.1 (from matplotlib)
  Downloading pyparsing-3.2.0-py3-none-any.whl.metadata (5.0 kB)
Requirement already satisfied: python-dateutil>=2.7 in /opt/tljh/user/lib/python3.10/site-packages (from matplotlib) (2.9.0.post0)
Requirement already satisfied: six>=1.5 in /opt/tljh/user/lib/python3.10/site-packages (from python-dateutil>=2.7->matplotlib) (1.16.0)
Downloading matplotlib-3.9.3-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (8.3 MB)
    _____ 8.3/8.3 MB 7.9 MB/s eta 0:00:0
000:0100:01
Downloading contourpy-1.3.1-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (324 kB)
    _____ 325.0/325.0 kB 8.4 MB/s eta
0:00:0000:01
Downloading cycler-0.12.1-py3-none-any.whl (8.3 kB)
Downloading fonttools-4.55.3-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (4.6 MB)
    _____ 4.6/4.6 MB 11.0 MB/s eta 0:0
0:0000:0100:01
Downloading kiwisolver-1.4.7-cp310-cp310-manylinux_2_12_x86_64.manylinux2010_x86_64.whl (1.6 MB)
    _____ 1.6/1.6 MB 9.3 MB/s eta 0:00:0
0:00:0100:01
Downloading pillow-11.0.0-cp310-cp310-manylinux_2_28_x86_64.whl (4.4 MB)
    _____ 4.4/4.4 MB 8.6 MB/s eta 0:00:0
000:0100:01m
Downloading pyparsing-3.2.0-py3-none-any.whl (106 kB)
    _____ 106.9/106.9 kB 6.2 MB/s eta
0:00:00
Installing collected packages: pyparsing, pillow, kiwisolver, fonttools, cycler, contourpy, matplotlib
  WARNING: The scripts fonttools, pyftmerge, pyftsubset and ttx are installed in '/home/jupyter-22cs131/.local/bin' which is not on PATH.
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.

```

Successfully installed contourpy-1.3.1 cyciler-0.12.1 fonttools-4.55.3 kiwi solver-1.4.7 matplotlib-3.9.3 pillow-11.0.0 pyparsing-3.2.0

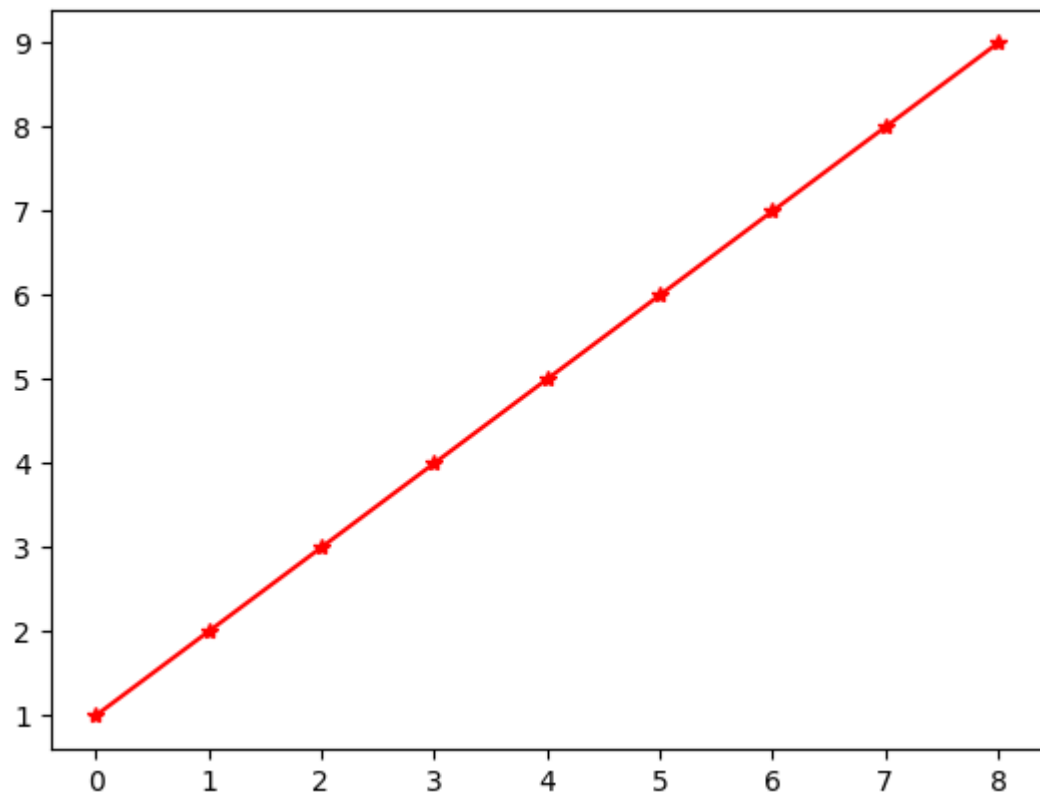
[notice] A new release of pip is available: 24.0 -> 24.3.1

[notice] To update, run: `pip install --upgrade pip`

```
In [2]: from matplotlib import pyplot as plt
import numpy as np
y=np.arange(1,10)
print(y)
```

```
[1 2 3 4 5 6 7 8 9]
```

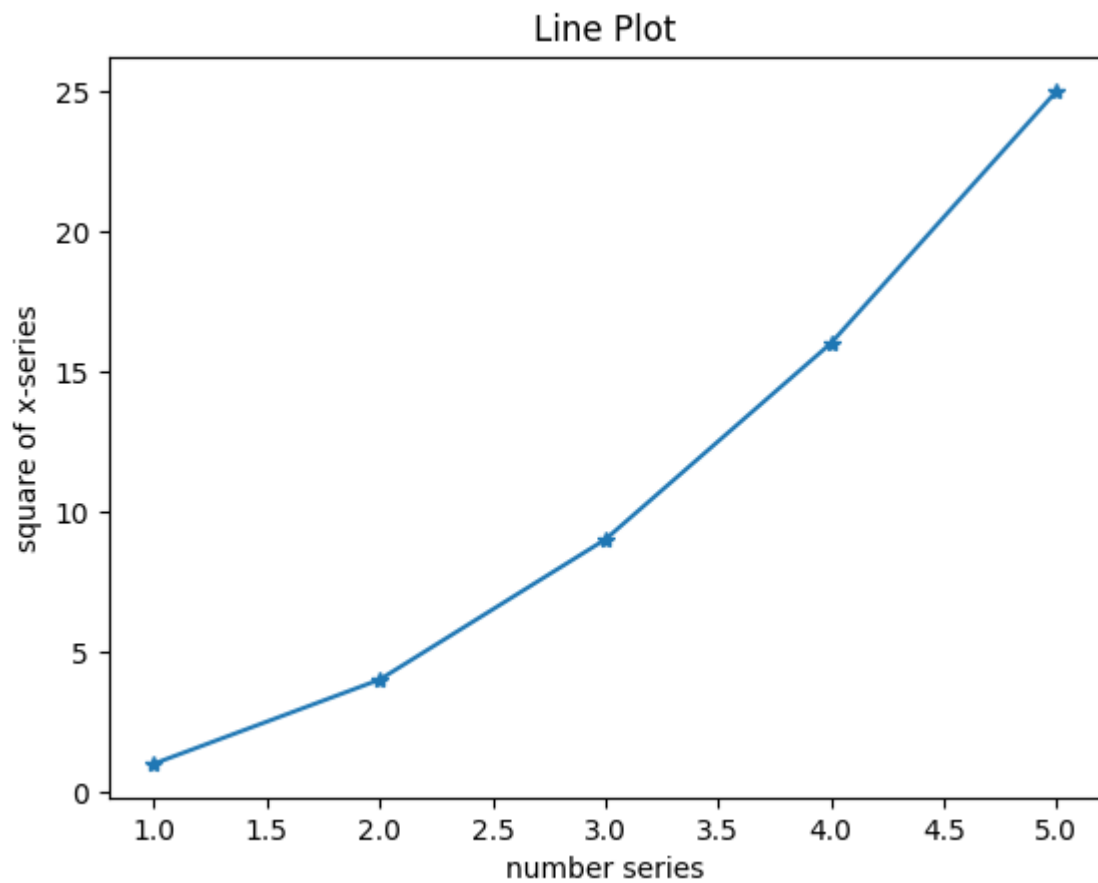
```
In [9]: plt.plot(y,color='r',marker='*')
plt.show()
```



```
In [16]: from matplotlib import pyplot as plt
import numpy as np
x=np.arange(1,6)
y=x**2
print(x)
print(y)
plt.plot(x,y,marker='*')
plt.title('Line Plot')
# plt.plot(y,color='black',marker='D')
plt.xlabel('number series')
plt.ylabel('square of x-series')
plt.show()
```

```
[1 2 3 4 5]
```

```
[ 1  4  9 16 25]
```



In []: