

# Authoring

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## 1 Colors

- Red
- Green
- Blue

## 2 Shapes

- Square
- Circle
- Triangle

## 3 Textures

- Smooth
- Bumpy
- Fuzzy

## 4 Equations

Einstein's theory of special relatively that expresses the equivalence of mass and energy:

$$E = mc^2$$

### 4.1 Bibliography

Knuth says always be literate [[@canavire-bacarreza\\_unintended\\_2018](#)].

1 + 1

2

### 4.2 References

## 5 Cross references

See Figure [1](#) in Section [5.1](#) for a demonstration of a simple plot.

See Equation [1](#) to better understand standard deviation.

### 5.1 Plot

```
import matplotlib.pyplot as plt
plt.plot([1,23,2,4])
plt.show()
```

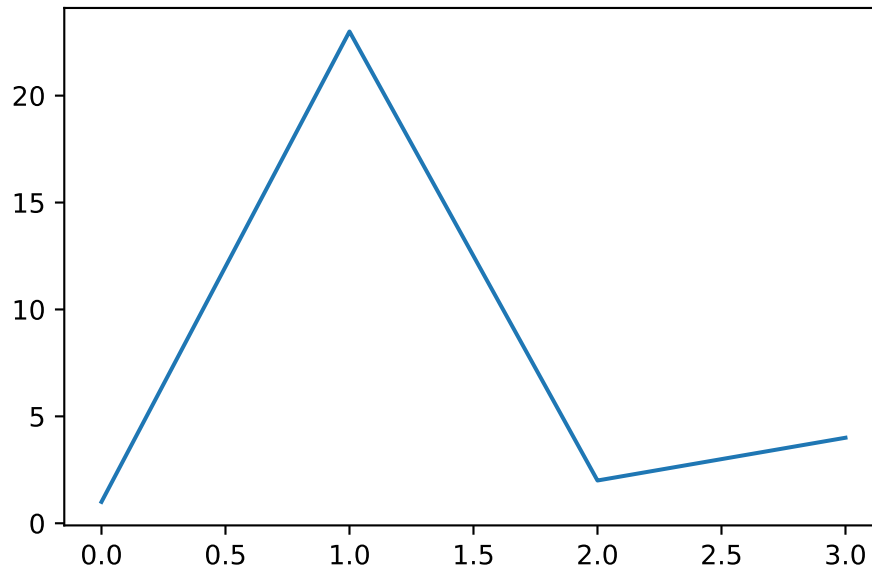


Figure 1: Simple Plot

## 5.2 Equation

$$s = \sqrt{\frac{1}{N-1} \sum_{i=1}^N (x_i - \bar{x})^2} \quad (1)$$

## 6 Callout

### Note

Note that there are five types of callouts, including: `note`, `tip`, `warning`, `caution`, and `important`.

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### ! Important

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## 7 Article layout

### 7.1 Placing Colorbars

Colorbars indicate the quantitative extent of image data. Placing in a figure is non-trivial because room needs to be made for them. The simplest case is just attaching a colorbar to each axes:<sup>1</sup>.

<sup>1</sup> See the [Matplotlib Gallery](#) to explore colorbars further

```
import matplotlib.pyplot as plt
import numpy as np

fig, axs = plt.subplots(2, 2)
fig.set_size_inches(20, 8)
cmaps = ['RdBu_r', 'viridis']
for col in range(2):
    for row in range(2):
        ax = axs[row, col]
        pcm = ax.pcolormesh(
            np.random.random((20, 20)) * (col + 1),
            cmap=cmaps[col]
        )
        fig.colorbar(pcm, ax=ax)
plt.show()
```

