## Zen Markdown Demo

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## 0.1 with class

```
class test:
    def __init__(self):
        print("hi")

    def test(self):
        print("hi")

t = test()
t.test()
```

```
hi
hi
```

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

## 1 Lax example

$$\begin{pmatrix} x^2 + y^2 & = 1\\ y & = \sqrt{1 - x^2} \end{pmatrix}$$

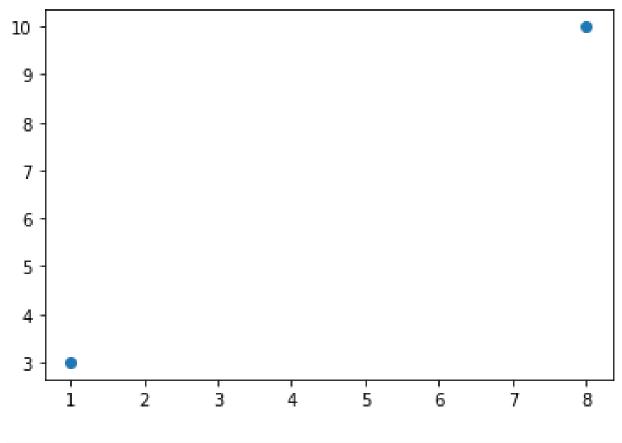
```
import matplotlib.pyplot as plt
import numpy as np

xpoints = np.array([1, 8])
ypoints = np.array([3, 10])
print(xpoints)
print(ypoints)
```

```
[1 8]
[ 3 10]
```

## 2 Matplot lib example

```
plt.plot(xpoints, ypoints, 'o')
```



```
d = {'col1': [1, 2], 'col2': [3, 4]}
df = pd.DataFrame(data=d)
df.to_markdown()
#
```

```
name 'pd' is not defined------
    1 d = {'coll': [1, 2], 'col2': [3, 4]}
----> 2 df = pd.DataFrame(data=d)
    3 df.to_markdown()
    4 #
NameError: name 'pd' is not defined
```

```
import pandas as pd
d = {'col1': [1, 2], 'col2': [3, 4]}
df = pd.DataFrame(data=d)
df.to_latex()
```

	col1	col2
0	1	3
1	2	4