

```
import numpy as np
X=np.array([
    [40,45],
    [42,43],
    [38,40],
    [75,78],
    [80,82],
    [78,72],
    [90,92],
    [88,89],
    [92,94]
])
from sklearn.cluster import KMeans
kmeans=KMeans(n_clusters=4,random_state=0)
kmeans.fit(X)
labels=kmeans.labels_
print(labels)

[1 1 1 0 0 3 2 2 2]

from matplotlib import pyplot as plt
plt.scatter(X[:,0],X[:,1],c=labels)
plt.scatter(
    kmeans.cluster_centers_[:,0],
    kmeans.cluster_centers_[:,1],
    marker='X',
    s=200
)
plt.xlabel("Maths Marks")
plt.ylabel("Science Marks")
plt.title("K-Means Clustering (K=3)")
plt.show()
```

K-Means Clustering (K=3)

