

## Questão 1

```
In [ ]: from sklearn import datasets
```

```
In [5]: data = datasets.load_breast_cancer()  
dados = data.data  
label = data.target
```

```
In [6]: from sklearn.model_selection import train_test_split  
  
x_train, x_test, y_train, y_test = train_test_split(dados, label, test_size=0.2)
```

## Usando KNN

```
In [9]: from sklearn.neighbors import KNeighborsClassifier  
  
knn = KNeighborsClassifier()  
knn.fit(x_train, y_train)
```

```
Out[9]: ▼ KNeighborsClassifier ⓘ ?  
KNeighborsClassifier()
```

```
In [10]: y_pred = knn.predict(x_test)
```

```
In [11]: cont = 0  
for i in range(len(y_pred)):  
    if(y_test[i] == y_pred[i]):  
        cont = cont + 1  
  
acertos_knn = cont/len(y_pred)  
acertos_knn
```

Out[11]: 0.9122807017543859

## Usando SVM

```
In [12]: from sklearn import svm
```

```
In [13]: svc = svm.SVC(kernel='linear', C=1, gamma=0.5)
svc.fit(x_train, y_train)

y_pred = svc.predict(x_test)
```

```
In [14]: cont = 0
for i in range(len(y_pred)):
    if(y_test[i] == y_pred[i]):
        cont = cont + 1

acertos_svm = cont/len(y_pred)
acertos_svm
```

Out[14]: 0.9473684210526315