In [175…
```python
import sklearn as sk
```

In [176…
```python
import pandas as pd
```

In [177…
```python
import numpy as np
```

In [178…
```python
import matplotlib.pyplot as plt
```

In [179…
```python
import array
```

In [191…
```python
>>> from sklearn.datasets import make_regression
>>> x, y = make_regression(n_samples=100, n_features=1, noise=10, random_state=42)
>>> x
#comentário: Temperature K, Membrane Thickness cm.
np.array([[343.15, 0.0178],# Trindade Model
    [ 353, 0.0254],# Sharaf Model
    [ 353, 0.0383],# Azizi Model
    [358, 0.0422],# Matozinhos
    [550, 0.0244]])# Matozinhos
>>> y
np.array([30.737, 37.79,-50.27, 3.40,42.22, 55.66])
```

Out[191]:
```
array([ 30.737,  37.79 , -50.27 ,   3.4  ,  42.22 ,  55.66 ])
```

In [192…
```python
from sklearn.linear_model import LinearRegression
modelo = LinearRegression()
```

In [193…
```python
modelo.fit(x,y)
```

Out[193]:
▾ LinearRegression
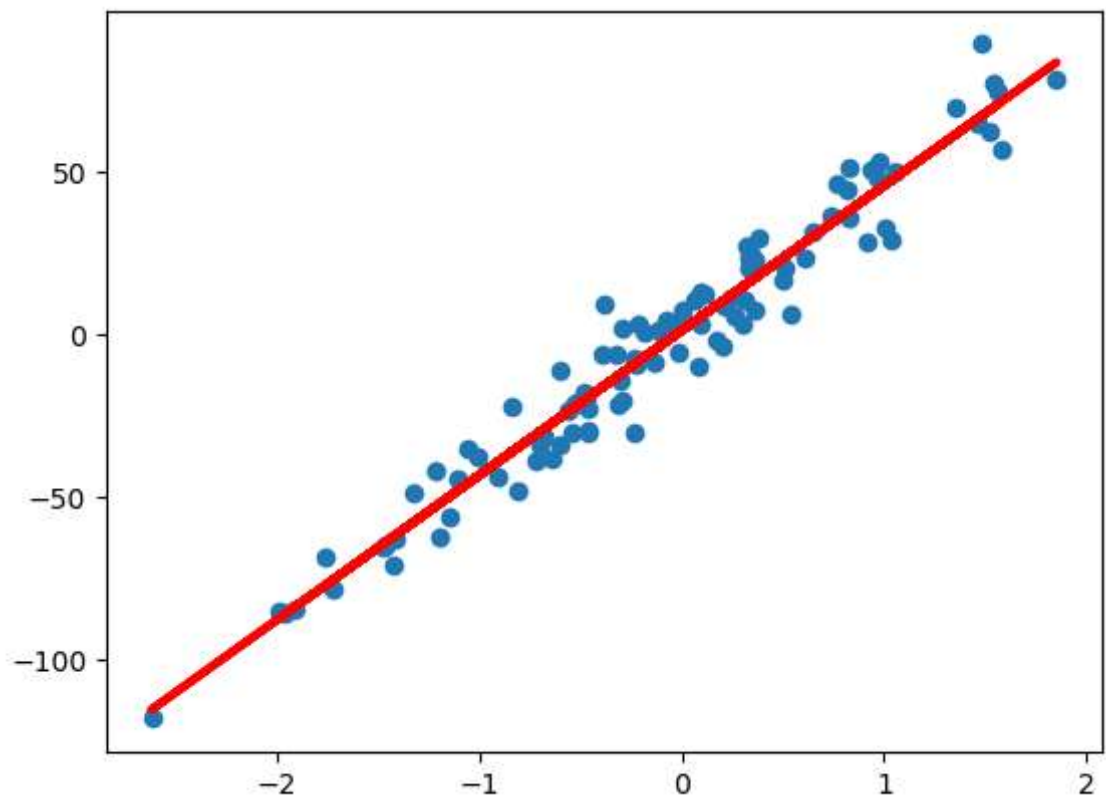
LinearRegression()

In [194…
```python
modelo.predict(x)
```

```
Out[194]:  array([  42.54856828,    5.03324069,  -45.83656503,   15.12937746,
                    -20.12803174,   29.94656099,  -19.42785547,   25.27494821,
                     28.34627855,   45.7592773 ,   37.68813662,   69.51110768,
                     33.98048027,   -8.5964817 ,  -34.76205235,    5.24270455,
                    -85.9170791 ,   23.9732675 ,   46.97981636, -115.24894321,
                     23.23768658,    5.47896688,  -19.53059691,   41.84299484,
                     70.69345143,   66.29439881,  -25.52556825,   -0.42689247,
                    -25.57302369,  -51.99092178,   17.03418737,   17.86007203,
                     12.76567283,  -22.37592891,  -39.18490488,    9.91307152,
                    -12.12192514,   17.23519684,   37.71668341,  -11.79692942,
                     17.22451328,  -28.91538268,   68.84425195,  -21.86534647,
                     -9.239998  ,  -16.25906134,  -12.21508079,  -27.50218088,
                     15.77388427,   10.4464224 ,  -13.39526319,    1.39234286,
                     -9.23926844,   66.83854422,  -15.94685144,   16.43453967,
                     15.88552473,   -7.08504419,   -9.259273  ,  -87.15682241,
                     15.56648976,   -8.86774452,  -47.99727999,  -30.03213736,
                    -63.86934722,   44.20895743,  -75.48535163,  -83.85564415,
                    -23.8213512 ,   35.26774284,   37.27146341,  -61.59366434,
                    -64.5362177 ,  -53.08572149,  -36.12733642,   71.34086366,
                     44.51557997,   11.91723391,   14.32386241,  -23.02571235,
                    -77.17939977,    6.0942013 ,    8.78023676,  -57.85571392,
                     48.14063539,   -3.97396706,  -19.69699777,    0.56533685,
                    -43.84223335,   -4.97895893,  -49.98178194,   61.43258402,
                      4.16587763,  -21.13154772,  -19.30436805,   83.47511588,
                    -62.14666203,  -30.82272414,   -2.03481069,  -12.57540759])
```

```python
In [195…   import matplotlib.pyplot as plt
           plt.scatter(x,y)
           plt.show()
```
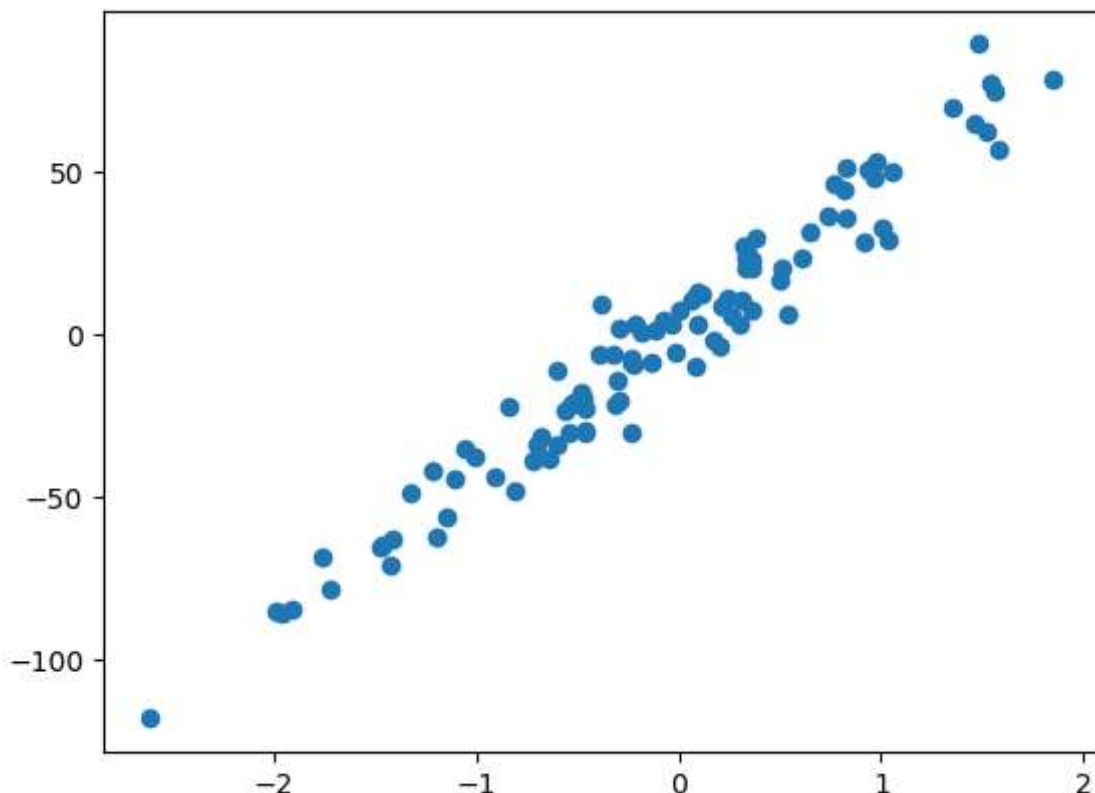


```python
In [196…   plt.scatter(x,y)
           plt.plot(x, modelo.predict(x), color='red', linewidth=3)
           plt.show()
```

In [ ]: