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In [27]: import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
import math
from sklearn import linear_model
y = [[-2,1],
[-5,-4],
[-3,1],
[0,3],
[-6,11],
[-2,5],
[1,0],
[5,-1],
[-1,-3],
[3,1]]
y = np.array(y)
x = np.ones((10,2))
xstandard = y[:,0]
mean = np.mean(xstandard, axis=0)
std = np.std(xstandard, axis=0, ddof=1)
stan = (xstandard-mean)/std
x[:,1] = stan
theta = np.linalg.inv(x.T @ x) @ x.T @ y[:,1]
print(theta)
x = np.array(x[:,1]).reshape(-1, 1)

reg = linear_model.LinearRegression().fit(x,y)

print("theta 0 from LinearRegression function")
print(reg.intercept_[1])

print("theta 1 from LinearRegression function")

print(reg.coef_[1])

[ 1.4          -1.50355704]
theta 0 from LinearRegression function
1.4
theta 1 from LinearRegression function
[-1.50355704]
```

In []: