

```
import numpy as np
import matplotlib.pyplot as plt
import statsmodels.api as sm

def draw(tau):
    lowess = sm.nonparametric.lowess
    prediction = lowess(Y, X, frac=tau, it=0)
    plt.plot(X, Y, 'o', color='black')
    plt.plot(prediction[:, 0], prediction[:, 1], color='red')
    plt.show()

X = np.linspace(-3, 3, num=1000)
Y = np.log(np.abs(X ** 2 - 1) + 0.5)

draw(0.2)
draw(0.1)
draw(0.05)
draw(0.01)
```