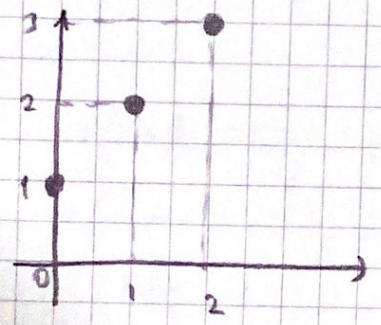

x	y	Hata	Kare
0	1	-1	1
1	2	-2	4
2	3	-3	9

1. iterasyon sonuçları = $\theta_0 = 0,2$
$\theta_1 = 0,26$
ortalama maliyet = 2,33

2. iterasyon sonuçları =

$$\frac{\alpha}{\alpha\theta_0} J = \frac{1}{m} \cdot \sum_{i=1}^{m} (\theta_0 + \theta_1 x_i - y_i) =$$

$$= \frac{1}{3} \cdot [(0,2 + (0,26) \cdot 0 - 1) + (0,2 + (0,26) \cdot 1 - 2) + (0,2 + (0,26 \cdot 2) - 3)]$$

$$= \frac{1}{3} \cdot [0,8 + (-1,54) + (-2,28)] = -1,00667$$

$$\frac{\alpha}{\alpha\theta_1} J = \frac{1}{3} \cdot [(0,8) \cdot 0 + (-1,54) \cdot 1 + (-2,28) \cdot 2]$$

$$= -2,033$$

$$\theta_0 = 0,2 - (0,1) \cdot (-1,00667) = 0,300067$$

$$\theta_1 = 0,26 - (0,1) \cdot (-2,033) = 0,463330$$

3. iterasyon sonuçları

$$\frac{\partial}{\partial \theta_0} J = \frac{1}{3} \cdot [(0,30067 + (0,46330.0) - 1) + (0,30067 + (0,46330.1) - 2) + (0,30067 + (0,46330.2) - 3)]$$

$$= -0,69933 + (-1,23603) + (-1,77273)$$

$$= -3,70809$$

$$\frac{\partial}{\partial \theta_1} J = \frac{1}{3} [0.(-0,69933) + 1.(-1,23603) + 2.(-3,70809)] = -2,88407$$

$$\theta_0 = 0,30067 - (0,1).(-3,70809)$$

$$= 0,67148$$

$$\theta_1 = 0,46330 - (0,1).(-2,88407)$$

$$= 0,75171$$