	$x_i a$	$y_i a$
batch1	1180	221900
	2570	538000
Batch 2	770	180000
	1960	604000

step1: $(x_i a, y_i a)$, $n = 0.01$, epochs $= 1$, $m = -1$, $c = -1$

iter $= 1$, batch $= 1$

calculation gradient with respect to m, c

$$\frac{\partial \epsilon}{\partial m} = \frac{-1}{bs} \sum_{i=1}^{bs} [(y_i a - m x_i a - c)(x_i a)]$$

$$= -\frac{1}{2} \sum_{i=1}^{2} [(y_i a - m x_i a - c)(x_i a)]$$

$$= -\frac{1}{2} \Big[[221900 - (-1)(1180) - (-1)](1180) +$$

$$(538000 - (-1)(2570) - (-1)](2570)]$$

$$= -\frac{1}{2} [(221900 + 1180 + 1)(1180) + (538000 +$$

$$2570 + 1)(2570)]$$

$$= -\frac{1}{2} [223081(1180) + 540571(2570)]$$

$$= -\frac{1}{2} [263235550 + 1389267470]$$

$$= -\frac{1}{2} (1652503050)$$

$$\frac{\partial E}{\partial c} = \frac{-1}{bs} \sum_{i=1}^{bs} (y_i{}^a - mx_i{}^a - c)$$

$$\therefore = -\frac{1}{2} [22308 + 540571]$$

$$= -381826$$

$$\Delta m = -\eta \cdot \frac{\partial E}{\partial m}$$

$$= -(0.01)(-82625 1325)$$

$$= 826 2515.25$$

$$\Delta c = -\eta \cdot \frac{\partial E}{\partial c}$$

$$= -(0.01)(-381826)$$

$$= 3818.26$$

$$m = m + \Delta m$$

$$= -1 + 826 2515.25$$

$$= 8262514.25$$

$$c = c + \Delta c$$

$$= -1 + 3818.26$$

$$= 3817.26$$

$$batch = batch + 1$$

$$= 2$$