Data set x = [3 1 0 4], y = [2 2 1 3]
m = 4
Chosen values:
$\Theta_0 = 1$
$\Theta_1 = 1$
$\alpha = 0.2$

repeat until convergence

{
$\Theta_0 := \Theta_0 - \alpha * (1/m) \sum_{i}^{m=1} (h(x^i) - y^i)$

$\Theta_1 := \Theta_1 - \alpha * (1/m) \sum_{i}^{m=1} (h(x^i) - y^i) * x^i$

}

(first iteration)
$\Theta_0 = 1 - 0.2 * .25 * 4 = 0.8$
$\Theta_1 = 1 - 0.2 * .25 * 14 = 0.3$

(second iteration)
$\Theta_0 = 0.8 - 0.2 * .25 * -2.4 = 0.92$
$\Theta_1 = 0.3 - 0.2 * .25 * -5.8 = 0.59$

(third iteration)
$\Theta_0 = 0.92 - 0.2 * .25 * 0.4 = 0.9$
$\Theta_1 = 0.59 - 0.2 * .25 * 2.7 = 0.455$

(fourth iteration)
$\Theta_0 = 0.038$
$\Theta_1 = 0.5035$