Assignment 7

Day 1 (x)	Day 2 (y)
5551.82208	4931.26380
4983.17184	4775.53968

Step 1: $\eta = 0.1$, epochs = 2, $m = 1$, $c = -1$, $\gamma = 0.9$,

$v_m = 0$, $v_c = 0$

Step 2: Set iteration = 1

Step 3: Set sample = 1

Step 4: $y = (1)(5551.82208) - 1 = 5550.82208$

Step 5: $\frac{\partial E}{\partial m} = -(4931.26380 - 1(5551.82208) + 1) * 5551.822208$

$\frac{\partial E}{\partial m} = 3439677.338750$

$\frac{\partial E}{\partial c} = -(4931.26380 - 1(5551.82208) + 1)$

$\frac{\partial E}{\partial c} = 619.55828$

Step 6: $v_m = 0.9(0) - (0.1)(3439677.338750)$

$v_m = -343967.733375$

$v_c = 0.9(0) - (0.1)(619.55828)$

$v_c = -61.95583$

Step 7: $m = 1 + c - 343967.733875)$

$= -343966.733875$

$c = -1 + (-61.95583)$

$= -62.95583$

Step 8: sample $i = i + 1 = 2$

repeat step 4

Step 4: $y = (-343966.734)(4983.17184) + (-62.955\ 83)$

$y = -17140545405.72$

Step 5: $\frac{\partial E}{\partial M} = -((4775.5398 - (-343966.734)$

$(4983.19184) - (-6.2.95583))(4983.\ 17184)$

$\frac{\partial E}{\partial M} = -8541406595607.112$

$\frac{\partial E}{\partial c} = -17140561 81.261$

Step 6: $Um = 0.9(-343967.734) - (0.1)(-854140659\ 5607.112)$

$UM = -8541409696 9131.67$

$Vc = 0.9(-61.95583) - (0.1)(-1714050181.\ 261)$

$Vc = -17140507 3.58634$

Step 7: $m = 343966.734 - 8541409696 9131.67$

$m = -8541413 13098.y$

$c = -62.95583$

Step 8: iteration +1 = 2, sample = 1 repeat step 4.

Step 3: $Y = (-8541413130984)(5551.82208) + (-6249.5583)$

$Y = -4.720406014E^{15}$

Step 5: $\frac{\partial E}{\partial M} = -(4931.26380 + 4.720406014E^{15})(5551.82208)$

$= -2.632696571 56E^{19}$

$\frac{\partial E}{\partial C} = -4742040601 50E^{15}$

Step 6: $V_M = (0.9)(-8541409691 3.67) - (0.1)(-2.632696571 56E^{19})$

$= 2.6326958E^{18}$

$V_C = (0.9)(-1.714050 73.886 34) - (0.1)(-4.720406015 0E^{15})$

$= 4.74203906E^{14}$

Step 7: $m = -8541413130 98.442.6326958E^{18}$

$= 2.6369495E^{18}$

$C = -62.9558 3 + 4.74203906E^{14}$

$= 4.74203906E^{14}$

Step 8: Sample = 2
repeat step 4!

$Y = 1.3119117 18E^{22}$

Step 5: $\frac{\partial E}{\partial M} = -6.532503 25E^{25}$

$\frac{\partial E}{\partial C} = -1.3119 7 18E^{22}$

Step 6: $V_m = (0.9)(2.63269458E18) - (0.1)(-6.53758875E25)$

$= 6.537511 12E24$

$V_c = (0.9)(4.74203906E14) - (0.1)(-1.31191218E22)$

$= 1.31191761E21$

Step 7: $m = 2.63269495E + 6.537511 12E24$

$m = 6.537513 75E24$

$C = 4.74203906E14 + 1.31191761E21$

$C = 1.31191808E21$