Training step 1 / Epoch 1

$w = [w_0 \quad w_1 \quad w_2] = [1 \quad 1 \quad 1] \qquad \alpha = 0.1$

$h(x_i) = w_0 x_{i,0} + w_1 x_{i,1} + w_2 x_{i,2}$

$= \sum_{j=0}^{n} w_j x_{i,j} \qquad x_{i,0} = 1$

$h(x_1) = 1 \times 1 + 1 \times 1 + 1 \times 2 = 4$

$h(x_2) = 1 \times 1 + 1 \times 2 + 1 \times 10 = 13$

$J(w) = \frac{1}{2 \times 2} \left[(4-6)^2 + (13-24)^2 \right]$

$= 31.25$

$$w_j := w_j - \alpha \frac{1}{m} \sum_{i=1}^{m} (h(x_i) - y_i)\, x_{i,j}$$

$$w_0 = 1 - 0.1 \times \frac{1}{2}\left[(4 - 6 \cdot) \times \underset{\downarrow}{1} + (13 - 24) \times \underset{\downarrow}{1} \right]$$

$x_{1,0}$ $\qquad$ $x_{2,0}$

$$= w$$

$$w_1 = 1 - 0.1 \times \frac{1}{2}\left[(4 - 6 \cdot)\, 1 + (13 - 24)\, 2 \right]$$

$$= w$$

$$w_2 = 1 - 0.1 \times \frac{1}{2}\left[(4 - 6)\, 2 + (13 - 24)\, 10 \right]$$

$$= w$$

Epoch 2

$w = [w_0 \quad w_1 \quad w_2] =$