Initially,

w_1	w_2	b
0.7	0.7	0.7

Iteration 1

$(x_1, x_2, d) = (170, 90, 1)$

$$\text{net} = w_1 x_1 + w_2 x_2 + b$$
$$= 0.7 \times 170 + 0.7 \times 90 + 0.7$$
$$= 182.7$$

$$y = \tanh(\text{net})$$
$$= \tanh(182.7)$$
$$= 1.0$$

Correct!

$$w_1 \leftarrow w_1 + \alpha(d - y)x_1$$
$$= 0.7 + 0.3 \times (1 - 1.0) \times 170$$
$$= 0.7$$

$$w_2 \leftarrow w_2 + \alpha(d - y)x_2$$
$$= 0.7 + 0.3 \times (1 - 1.0) \times 90$$
$$= 0.7$$

$$b \leftarrow b + \alpha(d - y)$$
$$= 0.7 + 0.3 \times (1 - 1.0)$$
$$= 0.7$$

w_1	w_2	b
0.7	0.7	0.7

Iteration 2

$(x_1, x_2, d) = (190, 95, -1)$

$$\text{net} = w_1 x_1 + w_2 x_2 + b$$
$$= 0.7 \times 190 + 0.7 \times 95 + 0.7$$
$$= 200.2$$

$$y = \tanh(\text{net})$$
$$= \tanh(200.2)$$
$$= 1.0$$

Incorrect!

$$w_1 \leftarrow w_1 + \alpha(d - y)x_1$$
$$= 0.7 + 0.3 \times (-1 - 1.0) \times 190$$
$$= -113.3$$

$$w_2 \leftarrow w_2 + \alpha(d - y)x_2$$
$$= 0.7 + 0.3 \times (-1 - 1.0) \times 95$$
$$= -56.3$$

$$b \leftarrow b + \alpha(d - y)$$
$$= 0.7 + 0.3 \times (-1 - 1.0)$$
$$= 0.1$$

w_1	w_2	b
-113.3	-56.3	0.1

Iteration 3

$(x_1, x_2, d) = (160, 50, -1)$

$$w_1 \leftarrow w_1 + \alpha(d - y)x_1$$
$$= -113.3 + 0.3 \times (-1 - -1.0) \times 160$$
$$= -113.3$$

$$\begin{aligned} \text{net} &= w_1 x_1 + w_2 x_2 + b \\ &= -113.3 \times 160 + -56.3 \times 50 + 0.1 \\ &= -20942.9 \end{aligned}$$

$$\begin{aligned} y &= \tanh{(\text{net})} \\ &= \tanh(-20942.9) \\ &= -1.0 \end{aligned}$$

Incorrect!

$$\begin{aligned} w_2 &\leftarrow w_2 + \alpha(d - y)x_2 \\ &= -56.3 + 0.3 \times (-1 - -1.0) \times 50 \\ &= -56.3 \end{aligned}$$

$$\begin{aligned} b &\leftarrow b + \alpha(d - y) \\ &= 0.1 + 0.3 \times (-1 - -1.0) \\ &= 0.1 \end{aligned}$$

w_1	w_2	b
-113.3	-56.3	0.1

Iteration 4

$$(x_1, x_2, d) = (180, 70, -1)$$

$$\begin{aligned} \text{net} &= w_1 x_1 + w_2 x_2 + b \\ &= -113.3 \times 180 + -56.3 \times 70 + 0.1 \\ &= -24334.9 \end{aligned}$$

$$\begin{aligned} y &= \tanh{(\text{net})} \\ &= \tanh(-24334.9) \\ &= -1.0 \end{aligned}$$

Incorrect!

$$\begin{aligned} w_1 &\leftarrow w_1 + \alpha(d - y)x_1 \\ &= -113.3 + 0.3 \times (-1 - -1.0) \times 180 \\ &= -113.3 \end{aligned}$$

$$\begin{aligned} w_2 &\leftarrow w_2 + \alpha(d - y)x_2 \\ &= -56.3 + 0.3 \times (-1 - -1.0) \times 70 \\ &= -56.3 \end{aligned}$$

$$\begin{aligned} b &\leftarrow b + \alpha(d - y) \\ &= 0.1 + 0.3 \times (-1 - -1.0) \\ &= 0.1 \end{aligned}$$

w_1	w_2	b
-113.3	-56.3	0.1

Iteration 5

$$(x_1, x_2, d) = (170, 90, 1)$$

$$\begin{aligned} \text{net} &= w_1 x_1 + w_2 x_2 + b \\ &= -113.3 \times 170 + -56.3 \times 90 + 0.1 \\ &= -24327.9 \end{aligned}$$

$$\begin{aligned} y &= \tanh{(\text{net})} \\ &= \tanh(-24327.9) \\ &= -1.0 \end{aligned}$$

Incorrect!

$$\begin{aligned} w_1 &\leftarrow w_1 + \alpha(d - y)x_1 \\ &= -113.3 + 0.3 \times (1 - -1.0) \times 170 \\ &= -11.3 \end{aligned}$$

$$\begin{aligned} w_2 &\leftarrow w_2 + \alpha(d - y)x_2 \\ &= -56.3 + 0.3 \times (1 - -1.0) \times 90 \\ &= -2.3 \end{aligned}$$

$$\begin{aligned} b &\leftarrow b + \alpha(d - y) \\ &= 0.1 + 0.3 \times (1 - -1.0) \\ &= 0.7 \end{aligned}$$

w_1	w_2	b

w_1	w_2	b
-11.3	-2.3	0.7