

1c

Chosen number of iterations: 1000.

Learning rate( $\eta$ )	$w_1$	$w_2$
0,0001	0,049	-0,0003
0,001	0,437	-0,029
0,01	2,039	-0,769
0,1	4,663	-2,211
1	7,250	-3,519
10	9,667	-4,731
100	50	-25

The slower the learning rate ( $\eta \rightarrow 0$ ), the slower convergence. We would need more iterations to have a chance to get to the minimum.

$\eta = 0,1$  seems to be a very good rate, because this corresponds well to the Figure ~~in~~/plot of  $L_{\text{sample}}(w)$ . When the learning rate increases, ~~the~~ the value of  $w$  seems to drift away from what seems to be the correct minima (which is around  $(-4, -2)$  according to the Figure).