1D-GRADIENT-DESCENT($\Theta_{init}, \eta, f, f', \epsilon$)

1 $\Theta^{(0)} = \Theta_{init}$

2 $t = 0$

3 **repeat**

4 $t = t + 1$

5 $\Theta^{(t)} = \Theta^{(t-1)} - \eta \, f'(\Theta^{(t-1)})$

6 **until** $|f(\Theta^{(t)}) - f(\Theta^{(t-1)})| < \epsilon$

7 **return** $\Theta^{(t)}$