

PERCEPTRON-THROUGH-ORIGIN(τ, \mathcal{D}_n)

```
1   $\theta = [0 \ 0 \ \dots \ 0]^T$ 
2  for  $t = 1$  to  $\tau$ 
3      changed = False
4      for  $i = 1$  to  $n$ 
5          if  $y^{(i)} (\theta^T x^{(i)}) \leq 0$ 
6               $\theta = \theta + y^{(i)} x^{(i)}$ 
7              changed = True
8      if NOT changed
9          break
10     return  $\theta$ 
```