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

```
1  θ = [0  0  ⋯  0]ᵀ
2  for t = 1 to τ
3      changed = False
4      for i = 1 to n
5          if y⁽ⁱ⁾ (θᵀx⁽ⁱ⁾) ⩽ 0
6              θ = θ + y⁽ⁱ⁾x⁽ⁱ⁾
7              changed = True
8      if NOT changed
9          break
10     return θ
```