INFINITE-HORIZON-VALUE-ITERATION$(\mathcal{S}, \mathcal{A}, T, R, \gamma, \epsilon)$

```
for s ∈ S, a ∈ A :
    Q_old(s, a) = 0
while True:
    for s ∈ S, a ∈ A :
        Q_new(s, a) = R(s, a) + γ Σ_{s'} T(s, a, s') max_{a'} Q_old(s', a')
    if max_{s,a} |Q_old(s, a) − Q_new(s, a)| < ε :
        return Q_new
    Q_old = Q_new
```