```
function SMA*(problem) returns a solution sequence
  inputs: problem, a problem
  static: Queue, a queue of nodes ordered by f-cost

  Queue ← MAKE-QUEUE({MAKE-NODE(INITIAL-STATE[problem])})
  loop do
    if Queue is empty then return failure
    n ← deepest least-f-cost node in Queue
    if GOAL-TEST(n) then return success
    s ← NEXT-SUCCESSOR(n)
    if s is not a goal and is at maximum depth then
      f(s) ← ∞
    else
      f(s) ← MAX(f(n), g(s)+h(s))
    if all of n's successors have been generated then
      update n's f-cost and those of its ancestors if necessary
    if SUCCESSORS(n) all in memory then remove n from Queue
    if memory is full then
      delete shallowest, highest-f-cost node in Queue
      remove it from its parent's successor list
      insert its parent on Queue if necessary
    insert s on Queue
  end
```