	1	2	3	4	5	6	7	8	9	10
A										
B										
C										
D										
E										
F										
G										
H										
I										
J										

HELPER FUNCTION isValid (Coordinate c) → returns boolean

    if c.down > 10 or c.down < 1 or c.across > 10

    or c.across < 1

        return false

    if c in misses or c in hit

        return false

    return true

   end

stage = 1, initially

while stage = 1,

   Select random coordinate c until isValid(c) returns true

   if it hits, stage = 2, and cur_target = $\textcircled{c}$

end

                                                 a is a circularly linked list

while stage = 2,

   c = random selection from a {up, right, down, left} where

      up = (cur_target.across, cur_target.down −1)

      down = (cur_target.across, cur_target.down +1)

      left = (cur_target.across−1, cur_target.down)

      right = (cur_target.across +1, cur_target.down)

```
count = 1
while isValid(c) is false AND count ≤ 4,
    c = a.next  // next adjacent clockwise
    count++
endwhile
if count = 5.
    stage = 1.
else
    cur-direction = direction of c (up, right, down, or left)
    stage = 3.
endif
endwhile
while stage = 3
    continue firing in cur-direction until miss or sunk ship
    stage = 1.
endwhile


CAVEAT: if initial hit from stage 1 produces a sink, remain
        in stage 1.
```