

```

1  Definition runLoop (fuel : nat) (cprop : CProp  $\emptyset$ ): G Result :=
2    let fix runLoop'
3      (fuel : nat)
4      (cprop : CProp  $\emptyset$ )
5      (passed : nat)
6      (discards: nat)
7      : G Result :=
8    match fuel with
9    | 0    ret (mkResult discards false passed [])
10   | S fuel'
11     res  $\leftarrow$  genAndRun cprop (log2 (passed + discards));;
12     match res with
13     | Normal seed false
14       (* Fails *)
15       let shrinkingResult := shrinkLoop 10 cprop seed in
16       let printingResult := print cprop 0 shrinkingResult in
17       ret (mkResult discards true (passed + 1) printingResult)
18     | Normal _ true
19       (* Passes *)
20       runLoop' fuel' cprop (passed + 1) discards
21     | Discard _ _
22       (* Discard *)
23       runLoop' fuel' cprop passed (discards + 1)
24     end
25   end in
26   runLoop' fuel cprop 0

```