# Algorithm Description – Slot Machines

In plain English, point-form, think through the steps necessary to solve the given problem.

Make use of key words like *compare*, *iterate*, *store*.

In code, of course, these translate to conditional statements, loops, and using variables.

## Algorithm

INPUT

* Prompt for number of quarters
  + Ensure (0, 1000)
    - Store value
* Prompt for # of times first machine was played
  + Ensure [0, 33]
    - Store value
* Prompt for # of times second machine was played
  + Ensure [0, 98]
    - Store value
* Prompt for # of times third machine played
  + Ensure [0, 8]
  + Store value

PROCESS

* loop while quarters > 100
  + Check if # of quarters > 0
    - break
  + Add one “play” to first machine, subtract one quarter, add one “play” to total plays
    - If (machine #1 plays since last win ==35)
      * Add 30 quarters
      * Set machine #1 plays since last win to 0
  + Check if # of quarters > 0
    - Break
  + Add one “play” to second machine, subtract one quarter, add one “play” to total plays
    - If (machine #2 plays since last win == 100)
      * Add 60 quarters
      * Set machine #2 plays since last win to 0
  + Check if # of quarters > 0
    - break
  + Add one “play” to third machine”, subtract 1 quarter, add one “play” to total plays
    - If (machine #3 plays since last win == 10)
      * Add 9 quarters
      * Set machine #3 plays since last win to 0

OUTPUT

* Print(“Martha plays \(totalPlays) times before going broke.”)