# Test Plan – Slot Machines

Necessary cases to test will vary by problem.

As a starting point, write a test plan that looks for:

* the typical cases for the problem given
* the boundary conditions on all input values
* invalid inputs

Show the input sequence for a given case, and list the expected output.

| Test Cases | |
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| **Description** | **Given Input (in bold) and Expected Output** |
| Typical case(s) | How many quarters does Martha have in the jar?  *48*  How many times has the first machine been played since paying out?  *3*  How many times has the second machine been played since paying out?  *10*  How many times has the third machine been played since paying out?  *4*  Martha plays 66 times before going broke. |
| Boundary condition(s)   * the first machine cannot go over 34 because it pays out at 35 | How many quarters does Martha have in the jar?  *48*  How many times has the first machine been played since paying out?  *34*  How many times has the second machine been played since paying out?  *10*  How many times has the third machine been played since paying out?  *4*  Martha plays 66 times before going broke. |
| * The second machine cannot go over 59 as it pays out at 60 turns | How many quarters does Martha have in the jar?  *48*  How many times has the first machine been played since paying out?  *3*  How many times has the second machine been played since paying out?  *59*  How many times has the third machine been played since paying out?  *4*  Martha plays 66 times before going broke. |
| * The third machine cannot go over 9 as it pays out after 10 turns | How many quarters does Martha have in the jar?  *48*  How many times has the first machine been played since paying out?  *3*  How many times has the second machine been played since paying out?  *10*  How many times has the third machine been played since paying out?  *9*  Martha plays 66 times before going broke. |
| * There cannot be more than 999 quarters in the jar because that is a boundary | How many quarters does Martha have in the jar?  *999*  How many times has the first machine been played since paying out?  *3*  How many times has the second machine been played since paying out?  *10*  How many times has the third machine been played since paying out?  *4*  Martha plays 66 times before going broke. |
| * None of the inputs can be below 0, as you cannot have a negative amount of spins or quarters | How many quarters does Martha have in the jar?  *1*  How many times has the first machine been played since paying out?  *0*  How many times has the second machine been played since paying out?  *0*  How many times has the third machine been played since paying out?  *0*  Martha plays 0 times before going broke. |
| Invalid input(s)   * Can only take integers (this is applied to all of the inputs) | How many quarters does Martha have in the jar?  *Foo*  How many quarters does Martha have in the jar?  *48*  How many times has the first machine been played since paying out?  *3*  How many times has the second machine been played since paying out?  *10*  How many times has the third machine been played since paying out?  *4*  Martha plays 66 times before going broke. |