Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Quiz #7

Note: Both questions 1 and 2 read and write to the same memory at the bottom of the page.

1) (2 points) For the memory representation below, write in the row "New Value" any values that would change from executing the **Tube Intermediate Code** instruction. Note: Memory location 0 stores the start of the free memory.

**array\_set\_size a3 s6**

2) (1 point) For the same memory representation below, write in the row "New Value" any values that would change from executing the series of **Tube Code Assembly** instructions.

**mem\_copy 7 8**

**load 4 regA**

**load regA regB**

**add regB 1 regC**

**val\_copy '!' regD**

**store regD regC**

3) (1 point) Final value for registers after the above TCA instructions:

regA: \_\_\_\_\_\_\_

regB: \_\_\_\_\_\_\_

regC: \_\_\_\_\_\_\_

regD: \_\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Location | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Old Value | 10006 | 10000 | 'a' | 10002 | 5 | 1 | 4 | 2 | 0 |
| New Value |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Location | 10000 | 10001 | 10002 | 10003 | 10004 | 10005 | 10006 | 10007 | 10008 | 10009 |
| Old Value | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| New Value |  |  |  |  |  |  |  |  |  |  |