|  |  |  |
| --- | --- | --- |
| Cases | MuxF\_to\_F | Z |
| A | 11111111111111111111111111111111 | 0 |
| B | 10000000000000000000000000000000 | 0 |
| C | 00000000000000000000000000000001 | 0 |
| D | 00000000000000000000000000000000 | 1 |

The Z flag takes in a 32-bit value and outputs 1 if the value is 0. This is accomplished by performing OR operations on every bit and then preforming a NOT operation on the result.