



Challenge 3: LC-3

Answer the following questions. If there is an assembly error in computing an answer, please say so.
Version 1

1. What will output to the console after this code snippet runs?

```
...  
LEA R0, MSG_PTR  
PUTS  
HALT  
MSG_PTR .FILL x4000  
.END  
.ORIG x4000  
.STRINGZ "Hello World!\n"  
.END
```

2. Circle the instructions that result in errors.

- a. AND R0, R0, #15
- b. AND R0, R1, x15
- c. ADD R2, R2, R2
- d. ADD R3, #5, #5
- e. LDI R5, MYSTERY_VALUE
- f. STR R5, MYSTERY_VALUE
- g. LDR R3, R4, R5

3. Circle all the following ways to copy the value from R1 into R0

- a. ADD R1, R0, #0
- b. LDR R0, R1, #0
- c. STR R0, R1, #0
- d. AND R0, R1, #0
- e. AND R0, R1, R1
- f. ADD R0, R1, #0

4. What value do you have to add to make a single-digit number into its ASCII character equivalent?
(Both in decimal and hexadecimal)



Challenge 3:

All versions the same

1. Nothing is outputted
2. B, D, F, G
3. E,F
4. #48, x30

