CS 273 HW 3

7) (b) F34H + 5D6H

```
  1 1111 0011 0100
+ 0101 1101 0110
-----------------
0001 0101 0000 1010
```

150AH

(c) 20000H + 12FFH

```
  0010 0000 0000 0000 0000
+      0001 0010 1111 1111
---------------------------
0010 0001 0010 1111 1111
```

21 2FFH

8 (a) 24FH - 129H

```
  0010 0100 1111
- 0001 0010 1001
---------------
0001 0010 0110
```

126H

(c) 2FFFFH - FFFFFH

```
  1111  1111 1111 1111 1111
- 0010  1111 1111 1111 1111
-------------------------------
  1101  0000 0000 0000 0000
```

-D0000H

10) "U.S.A. is a country" CR, LF
"in North America" CR, LF

55 2E 53 2E 41 2E 20 69 73 20 61 20 63 6F
75 6E 74 72 79 0D 0A 69 6E 20 4E 6F 72 74 68
20 41 6D 65 72 69 63 61 0D 0A

16)

x	y	z	NAND
T	T	T	0
T	T	F	1
T	F	T	1
T	F	F	1
F	T	T	1
F	T	F	1
F	F	T	1
F	F	F	1

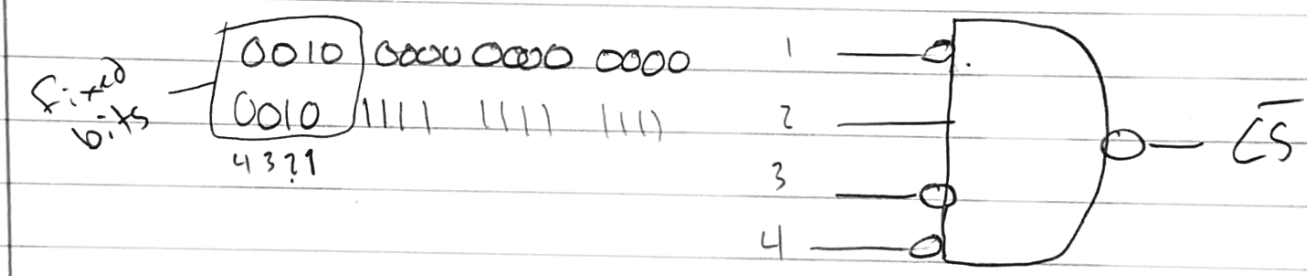
44) A0 → A13 = 14 address lines

number of locations = 2^{14} = 16384

≈ 16 K addressable memory

45) 2000H

2FFFH



65) Which section of CPU performs addition

ALU (arithmetic/Logic Unit)