ACTIVITY 13

1. (Review) Fill in the truth tables for the Boolean AND (&), OR (|), XOR (⊕), and NOT (¬) functions:

x	y	x & y
0	0	
0	1	
1	0	
1	1	

x	y	x | y
0	0	
0	1	
1	0	
1	1	

x	y	x ⊕ y
0	0	
0	1	
1	0	
1	1	

x	¬x
0	
1	

2.
```
  00111011     00111011     00111011
& 00001111   | 00001111   ⊕ 00001111   ¬ 00111011
```

3. Write a two-instruction sequence that computes 00111011b ⊕ 00001111b and stores the result in AL.

4. What value will AX contain after the following instructions execute?

(a)
```
mov ax, 0
not ax
```
AX = Decimal _____

(b)
```
mov ax, 3Ah
not ax
```
AX = Hexadecimal _____

5. Use a bit mask to determine if bit 0 or 3 is set (or both). In other words, the result should be zero if neither of those bits is set and nonzero otherwise.

```
  10011110     01110011     00000000
&_________   &_________   &_________
```

6. Write an instruction sequence that jumps to the label *ok* if the value in CL has bit 0 or 3 set (or both).