

# Quiz | Practice

aim 70

## Topics:

Boolean Algebra : Quiz 1C Problem 1 (honestly these questions are all the same)  
practice problems:  
topics: two's complement  
adding pos + neg binary numbers/carrying off digits  
arithmetic vs. logical shift

Assembly  
practice problems: LO2 Problem 3, Quiz #1A Problem 2  
topics: assemble instructions into binary encodings  
read assembly instructions for register values

Assembly calling conventions  
practice problems: Quiz #1C Problem 3  
topics: S registers vs. A/T registers  
- what's more efficient in each situation?

Stack detective  
practice problems: LO4 Problem 3  
topics: saving registers onto the stack  
choose instruction lines based on RA  
what are the arguments?

Static discipline  
practice problems: LO5 Problem 3, LO5 Problem 2  
topics: connecting digital devices  
"maximize noise margin"  $\Rightarrow \min(\text{low noise margin, high noise margin})$   
 $\Rightarrow \text{set } V_{OH} - V_{IH} = V_{IL} - V_{OL}$

Boolean Algebra  
practice problems: LO6 Problem 2  
topics: simplifying boolean expressions  
universal gate (can you make a NAND gate?)

CMOS  
practice problems: LO7 Problem 1  
topics: draw CMOS implementation  
can a function be implemented as a single CMOS gate?  
- is it not NON-INVERTING?