CS 273 HW 6

Ch 4

21)
```
    CBI  DDRA, 0        ; PA0 is input
    LDI  r20, $FF
    OUT  DDRB, r20      ; PORTB is output
set: SBIS PINA, 0       ; if PA0 set don't jump
    RJMP unset          ; if PA0 unset jump
    LDI  r21, $99
    OUT  PORTB, r21     ; send $99 to PORTB
    RJMP set
unset: LDI r21, $66
    OUT  PORTB, r21     ; send $66 to PORTB
    RJMP set
```

25)
```
    CBI  DDRB, 5
    CBI  DDRB, 6        <-- LDI r20, $FF
    OUT  DDRC, r20
set: SBIS PINB, 5
    RJMP unset
    SBIS PINB, 6
    RJMP unset
    LDI  r21, $AA
    OUT  PORTC, r21
    RJMP set
```

```
unset: LDI r21, $55
    OUT  PORTC, r21
    RJMP set
```

Ch 3.

17) CALL is a 4-byte instruction
18) RCALL is a 2-byte instruction
21) The addressed is stored to return, so 2 bytes are used.
22) RCALL is in the 4k range, but RET is the same instruction, so 2 bytes are used.
23) The SP register would have 0, and it needs to be initialized to the upper limit
24) When RET is executed, the top of stack is put to the program counter, and stack pointer is incremented.