(1) Unsigned Addition

| | | |
|---|---|---|
| $93_{10}$ | $01011101_2$ | $5D_H$ |
| $+122_{10}$ | $+\ 01111010_2$ | $+\ 7A_H$ |
| $215_{10}$ | $11010111_2$ | $D7_H$ |

(2) Signed Subtraction

| | | |
|---|---|---|
| $B3_H$ | $10110011_2$ | $10110011_2$ |
| $-\ E8_H$ | $-(11101000_2)$ | $+\ 00011000_2$ |
| $CB_H$ | | $11001011_2$ |

Verify

$B3_H = -(01001101_2) = -(4D_H) = -77_{10}$

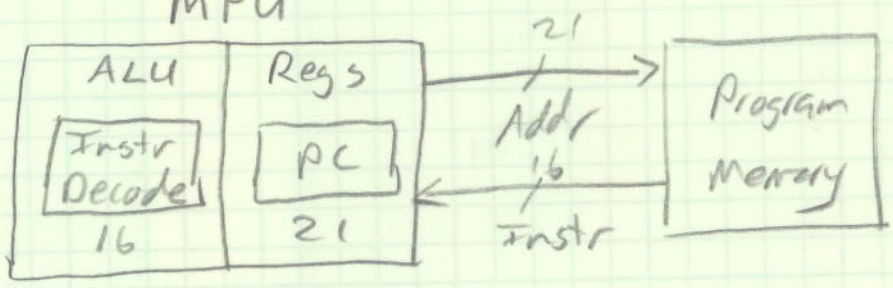
$-E8_H = 00011000_2 = +18_H = +24_{10}$

$CB_H = -(00110101) = -35_H = -53_{10}$ ✓

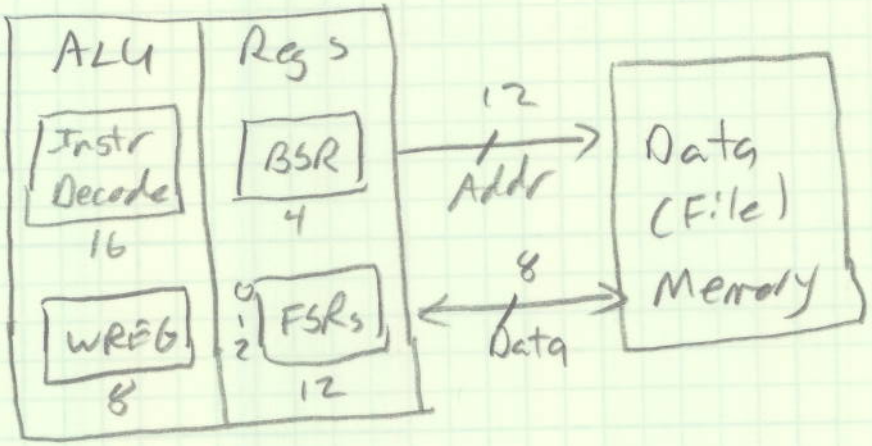
(3) 22-bit Address $\Rightarrow 2^{22} = 2^2 \cdot 2^{20} = \underline{4\ MB}$

$256k = 2^8 \cdot 2^{10} = 2^{18} \Rightarrow \underline{18\text{-bit Address}}$

(4)




(5)




(6). SFRs are the internal registers used for I/O and support devices

- Address range is $F80_H$ to $FFF_H$ is the last bank of Data Memory.