SUBWF

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SUBWF	Subtract W from f

Syntax:	[*label*] SUBWF f [,d [,a]
Operands:	$0 \leq f \leq 255$ $d \in [0,1]$ $a \in [0,1]$
Operation:	(f) − (W) → dest
Status Affected:	N, OV, C, DC, Z
Encoding:	0101 | 11da | ffff | ffff
Description:	Subtract W from register 'f' (2's complement method). If 'd' is 0, the result is stored in W. If 'd' is 1, the result is stored back in register 'f' (default). If 'a' is 0, the Access Bank will be selected, overriding the BSR value. If 'a' is 1, then the bank will be selected as per the BSR value (default).
Words:	1
Cycles:	1

Q Cycle Activity:

Q1	Q2	Q3	Q4
Decode	Read register 'f'	Process Data	Write to destination

Example 1:   SUBWF   REG, 1, 0

    Before Instruction
        REG   =   3
        W   =   2
        C   =   ?
    After Instruction
        REG   =   1
        W   =   2
        C   =   1   ; result is positive
        Z   =   0
        N   =   0

Example 2:   SUBWF   REG, 0, 0

    Before Instruction
        REG   =   2
        W   =   2
        C   =   ?
    After Instruction
        REG   =   2
        W   =   0
        C   =   1   ; result is zero
        Z   =   1
        N   =   0

Example 3:   SUBWF   REG, 1, 0

    Before Instruction
        REG   =   1
        W   =   2
        C   =   ?

After Instruction

```
REG    =    FFh   ;(2's complement)
W      =    2
C      =    0     ; result is negative
Z      =    0
N      =    1
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