

# MULWF

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MULWF	Multiply W with f			
Syntax:	[ <i>label</i> ] MULWF f [,a]			
Operands:	$0 \leq f \leq 255$ $a \in [0,1]$			
Operation:	$(W) \times (f) \rightarrow \text{PRODH:PRODL}$			
Status Affected:	None			
Encoding:	0000	001a	ffff	ffff
Description:	<p>An unsigned multiplication is carried out between the contents of W and the register file location 'f'. The 16-bit result is stored in the PRODH:PRODL register pair. PRODH contains the high byte. Both W and 'f' are unchanged. None of the status flags are affected.</p> <p>Note that neither overflow nor carry is possible in this operation. A zero result is possible but not detected. If 'a' is 0, the Access Bank will be selected, overriding the BSR value. If 'a' = 1, then the bank will be selected as per the BSR value (default).</p>			
Words:	1			
Cycles:	1			
Q Cycle Activity:				
	Q1	Q2	Q3	Q4
	Decode	Read register 'f'	Process Data	Write registers PRODH: PRODL

Example: MULWF REG, 1

Before Instruction

W	=	0xC4
REG	=	0xB5
PRODH	=	?
PRODL	=	?

After Instruction

W	=	0xC4
REG	=	0xB5
PRODH	=	0x8A
PRODL	=	0x94

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