

11111 111101  
000000 011111

$$\begin{array}{r} -3 \\ +31 \\ \hline -93 \end{array}$$

[illegible]

mod by  $\begin{pmatrix} 2 \\ 5 \end{pmatrix}$

Ans

ck sm

$$80 + 13 = 93$$

Multiplication example (6 bit operands):

$-19 * 9 = -209$ ,  $101101 * 001011 = 111100101111$

Sign-extend operands to 12 bits, long-hand multiply, add columns (in base 10), mod results by 2

		1	1	1	1	1	1	1	0	1	1	0	1
*		0	0	0	0	0	0	0	0	1	0	1	1
Carry		2	2	2	2	2	1	1	1	0	0	0	
		1	1	1	1	1	1	1	0	1	1	0	1
		1	1	1	1	1	1	0	1	1	0	1	
											0		
		1	1	1	1	0	1	1	0	1			
									0				
								0					
						0							
					0								
				0									
			0										
		0											
Dec		5	5	5	5	4	4	3	2	3	1	1	1
Binary		1	1	1	1	0	0	1	0	1	1	1	1

Multiplication example (6 bit operands):

$31 * 31 = 961$ ,  $011111 * 011111 = 001111000001$

Sign-extend operands to 12 bits, long-hand multiply, add columns (in base 10), mod results by 2

		0	0	0	0	0	0	0	1	1	1	1	1
*		0	0	0	0	0	0	0	1	1	1	1	1
Carry		0	0	1	2	3	4	4	3	2	1	0	
		0	0	0	0	0	0	0	1	1	1	1	1
		0	0	0	0	0	0	1	1	1	1	1	
		0	0	0	0	0	1	1	1	1	1		
		0	0	0	0	1	1	1	1	1			
		0	0	0	1	1	1	1	1				
							0						
						0							
					0								
				0									
			0										
		0											
Dec		0	0	1	3	5	7	8	8	6	4	2	1
Binary		0	0	1	1	1	1	0	0	0	0	0	1