

Function Unit

7	
Order of micro-operations	1st $F=A \text{ OR } B$
	2nd $F=A \text{ XOR } B$
	3rd $F=A \text{ AND } B$
	4th $F=B$
	5th $F=A-1$
	6th $F=slB$
	7th $F=A+1's \text{ c } B+1$
	8th $F=A \text{ (FS=00111)}$
	9th $F=A+1's \text{ c } B$
	10th $F=srB$
	11th $F=A+B+1$
	12th $F=1's \text{ c } A$
	13th $F=A+B$
	14th $F=A \text{ (FS=00000)}$
	15th $F=A+1$

Input A : 000000010100011000000011010010001 = 1460691

Input B : 000000010100011000000011010011000 = 1460698

Not B : 11111110101110011111100101100111

Expected Result:

1. A or B = 000000010100011000000011010011001 = 1460699
2. A xor B = 00000000000000000000000000001001 = 00000009
3. A and B = 000000010100011000000011010010000 = 1460690
4. B = 000000010100011000000011010011000 = 1460698
5. A - 1 = 000000010100011000000011010010000 = 1460690
6. Sl B = 0000000101000110000000110100110000 = 028C0D30
7. A + not B + 1 = 1111111111111111111111111111001 = FFFFFFF9
8. A = 000000010100011000000011010010001 = 01460691
9. A + not B = 11111111111111111111111111111000 = FFFFFFF8
10. Sr B = 000000001010001100000001101001100 = 00A3034C
11. A + B + 1 = 0010100011000000110100101010 = 28C0D2A
12. Not A = 1111111010111001111110010110110 = FEB9F96E
13. A + B = 0010100011000000110100101001 = 028C0D29
14. A = 000000010100011000000011010010001 = 01460691
15. A + 1 = 000000010100011000000011010010010 = 01460692