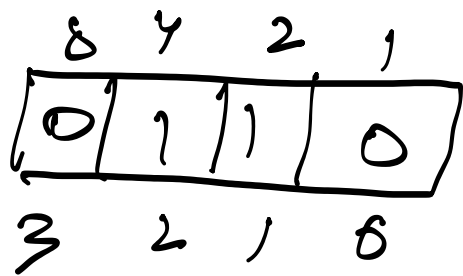


Right Shift



0110 → 6

0011 → 3

0001 → 1

Even

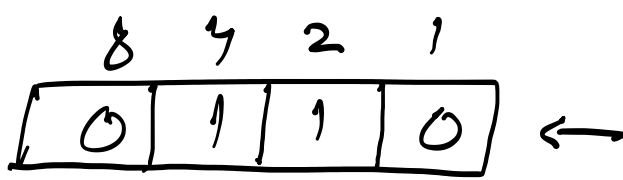
0110 → 6

0011 → 3

Even

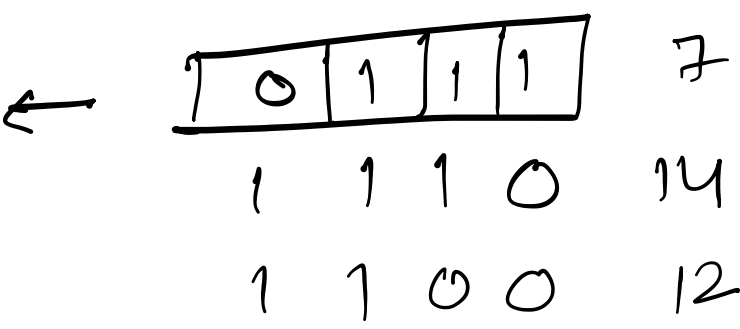
Bit Shifting

$2^4 = 16$
 $2^5 = 32$

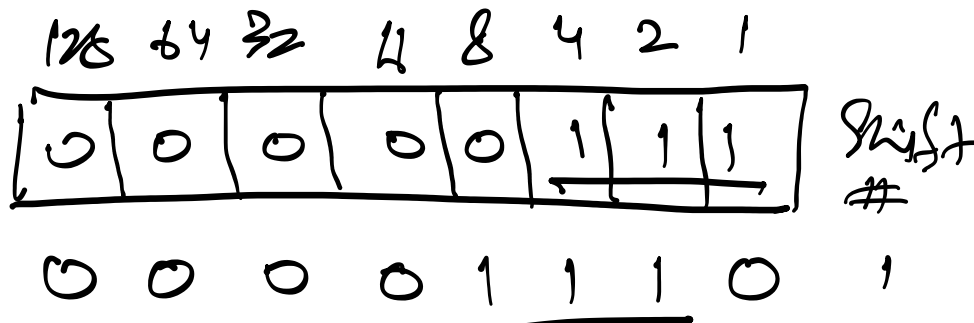


Left Shift

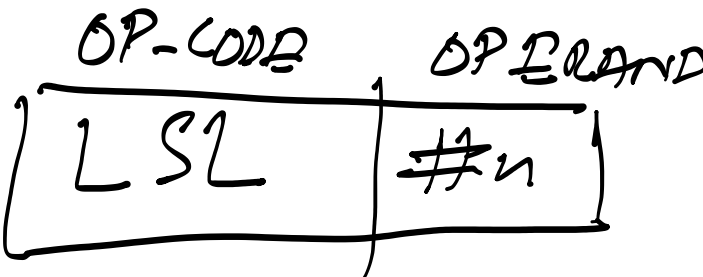
0110 → 6
1100 → 12
1000 → 8



$2^8 = 256$
 $2^5 = 32$



Left Shift

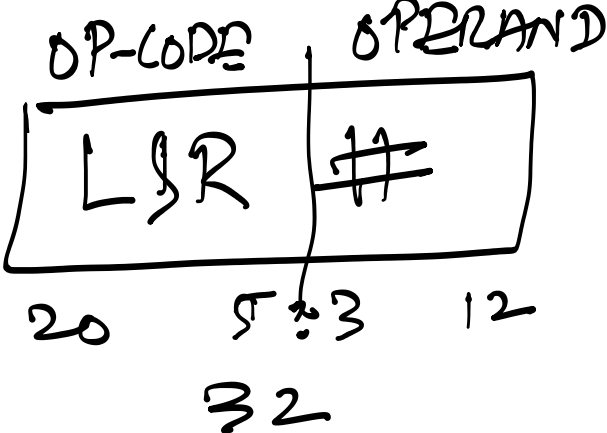


Main memory	
20	8
21	64
22	
23	

LDD 20
LSL #3
STO 21
END.

Den.	Bin.
ACC	ACC
8	00001000
64	01000000

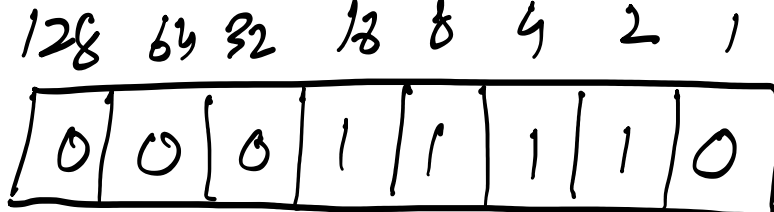
Right Shift



00010000 (1)
60100000 (2)
01000000 (3)

Bit OPS.

AND Clear 1 → 0
OR Set 0 → 1
XOR Toggle/Flip 0 → 1, 1 → 0



Bitmask: 00011110 OR 00000001 = 00011111

11110011
11101110 AND
11100010

247 AND 238 = 226

30 OR 1 = 31

10011100
00100010 OR
10111110

153 OR 34 = 196

+8	00001000
mask	11110111
+1	00000001
-8	11111000

1's Complement

2's complement { +5 0000101, -5 11111011
" { +8 00001000, -8 11111000

Main Mem.

50	
51	
52	+8
53	-8
54	

LDD S2
XOR #255
INC
STO S3
END

Den.	Bin.
ACC	ACC
8	00001000
247	11110111
248	11111000

7-10 Marks.

00001000
11111111 XOR
11110111