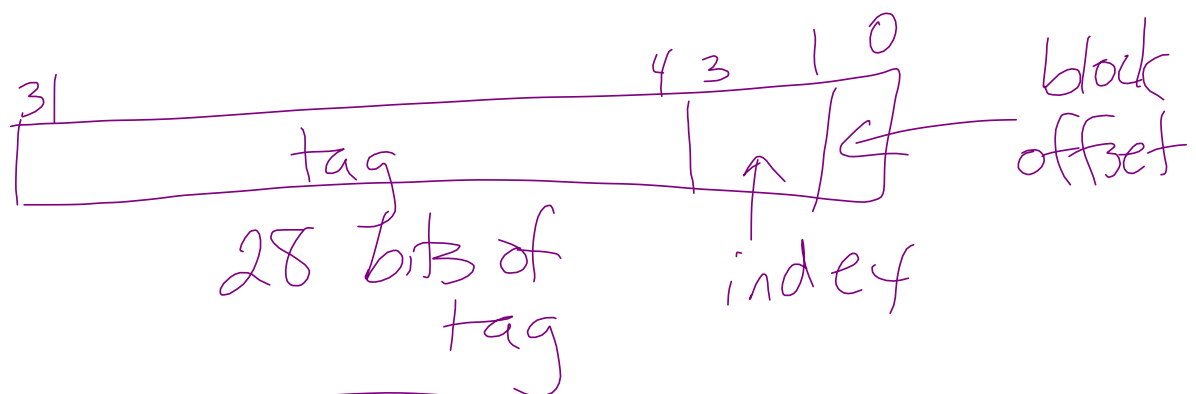$$8 \text{ blocks} \times \frac{1 \text{ set}}{1 \text{ block}} = 8 \text{ sets}$$

$$\text{bits of index} = 3$$
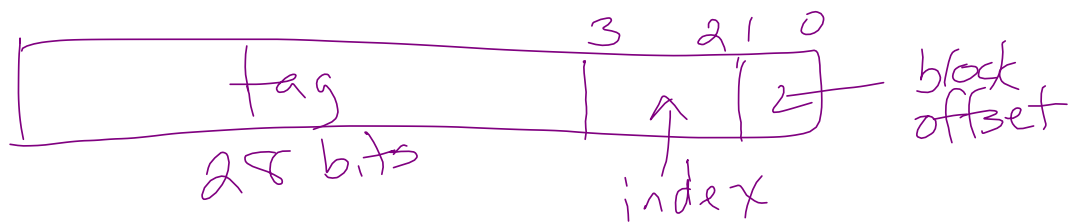

31 .... tag .... 4 3 ... 1 0 → block offset

28 bits of tag

index

$$\frac{2 \text{ words}}{1 \text{ block}}$$

$$\log_2 2 = 1$$

$$\frac{1 \; block}{1 \; set}$$

$$\frac{1 \; block}{4 \; words}$$

$$16 \; words \times \frac{1 \; block}{4 \; words} \times \frac{1 \; set}{1 \; block} = 4 \; sets$$

		3	2 1	0	
tag				2	block offset

28 bits   index

V	Tag	m[0x20]	m[0x21]	m[0x22]	m[0x23]
0		M[0]	M[1]	M[2]	M[3]
1		M[4]	M[5]	M[6]	M[7]
2		M[8]	M[9]	M[10]	M[11]
3					

block offset

| 0 | – | – | – | – | 0 | 0 | 0 | 0 1 |

57   56 57 58 59   00,01,10,11
                  0000 ____
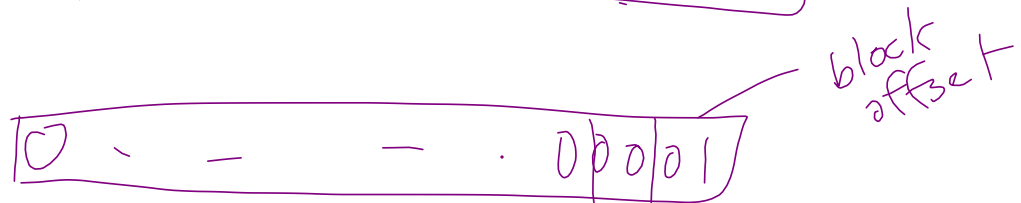
$$\left\lfloor \frac{57}{4} \right\rfloor = 14 \times 4 + 0$$
$$14 \times 4 + 1$$
$$14 \times 4 + 2 \quad 14 \times 4 + 3$$

block offset

2-way

$$16 \text{ words} \left(\times \frac{1 \text{ block}}{2 \text{ words}} \times \right) \frac{1 \text{ set}}{2 \text{ blocks}} = 4 \text{ sets}$$

block offset 1 bit

index 2 bits

A	Tag			B	Tag		
0		M[0]	M[1]			M[8]	M[9]
1							
2		M[4]	M[5]				
3							

0	0	0	0	1	m
0	0	1	0	0	m
0	1	0	0	0	

4, 5, 6, 7