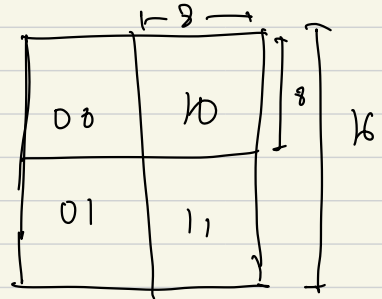


A -  $16 \times 16$  matrix, divided into 4 blocks,  
 $m, b = 4, n_1 = 8$

Algo<sup>n</sup>

```

for i → 0 to b:
  for j → 0 to b
    copy C
    for k → 0 to b:
       $C_{ij} = A_{ik} \cdot B_{kj}$ 
  
```



			A	B	C
i	j	k	ik	kj	ij
0	0	0	00	00	00
0	0	1	01	10	00
0	1	0	00	01	01
0	1	1	01	11	01
1	0	0	10	00	10
1	0	1	11	10	10
1	1	0	10	01	11
1	1	1	11	11	11

Each C block is copied 4 times (b)

Each of the 4 blocks of A & B (00, 01, 10 & 11) are getting copied 2-times ( $\sqrt{b}$ ).

$\therefore b \times \sqrt{b}$  transfers for A & B

$b$  transfers for C

size of block transferred =  $8 \times 8$  ( $n_1 \times n_1$ )

$$n^2 b \sqrt{b} + n^2 b \sqrt{b} + n^2 b$$

$$n^2 b (2\sqrt{b} + 1)$$

if 9 blocks, then,

A			
i	j	k	ik
0	0	0	00
0	0	1	
0	0	2	
0	1	0	00
0	1	1	
0	1	2	
0	2	0	00
0	2	1	
0	2	2	

$\therefore$  copied 3 times

$$\sqrt{9} = 3$$

$\therefore$  56 times  
each 6 block  
is copied