

2.25

(4)

for (i=0; i<a; i++)
 for (j=0; j<b; j++)

x10 → D[4*j] = i + j;

Index	Address (double words)
0 →	0
4 →	32
8 →	64
12 →	96

Outer Loop:

① add x7, x0, x0
 ② Outer_Loop: bge x7, x5, End_Outter
 ③ { add x29, x0, x0
 add x11, x10, x0
 ④ Inner_Loop: bge x29, x6, End_Inner
 add x12, x7, x29
 sd x12, 0(x11)
 addi x11, x11, 32
 { addi x29, x29, 1
 beq x0, x0, Inner_Loop
 End_Inner:
 { addi x7, x7, 1
 beq x0, x0, Outer_Loop
 End_Outter:

// i = 0
 // loop while i < a

// j = 0
 x11 = &D[0]

// loop while j < b

// i + j

// D[4*j] = 8 * 4 + 32 Bytes

// j++

= j * 32
 slli 5

// i++