186376881

| | Hit time | Access Time | Blocksize | # Blocks | Assoc | RP |
|---|---|---|---|---|---|---|
| L1 | 3 | 3 | 16 | 8 | 2 | LRU |
| L2 | 17-3 = 14 | 17 | 4×L1 = 64 | 16 | 4 | LRU |
| L3 | 43-17 = 26 | 43 | 2×L2 = 128 | 64 | 4 | Random |
| Main | 107 - 43 = 64 | 107 | | | | |

Assoc

addr 0 , addr Blocksize * #Block*i , addr 0      conflic 0 ⟹ 1

conflic until N· BS· #B

0 ☐
16 ☐
32 ☐
48 ☐
64 ☐
80 ☐
96 ☐
112 ☐

0 ☐ ☐ 64
16 ☐ ☐ 80
32 ☐ ☐ 96
48 ☐ ☐

☐ ☐ ☐ ☐

0
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

3  4  0  2
☐ ☐ ☐ ☐

|     | Write | buffer ? | | Longest Write |
|-----|-------|----------|---|---------------|
| L1  | B     | ✓        | | L1  3 |
| L2  | T     | ✓   } ?  | | L2  26 |
| L3  | B     | ✓        | | L3  26 |
|     |       |          | | Mem  64 |

Writing L2

| W | 4 | | W | 4 | | W | 4 | | W | 4 | | W | 4 |
|---|---|---|---|---|---|---|---|---|---|----|---|---|
| R | 28 | | W | 14 | | 14 | $\geq$ 11 | | 14 | | | 14 | |
|   |    | | R | 39 $\geq$ 15 | | 25 | | | 25 | | | 25 | |
|   |    | | | | | R | 400 $\geq$ 15 | | 26 $\geq$ 14 | | 26 $<$ 26 | |
|   |    | | | | | | | | R | 400 | | R | 400 |

17
23

L3

4
14
25
26  } 52
R  78

Mem        4
           14
           26
           63
           64
R  256

✓

|     | Access Time | Blocksize | # Blocks | Hit time | Assoc | RP |
|-----|-------------|-----------|----------|----------|-------|-----|
| L1  | 3           | 16        | 8        | 3        | 2     | LRU |
| L2  | 11          | 16        | 32       | 11−3 = 8 | 16    | Random |
| L3  | 37          | 16        | 64       | 37−11 = 26 | 64  | Random |

Main    103 −37 = 66

|     | Write | buffer ? |
|-----|-------|----------|
| L1  | B     | ✓        |
| L2  | T     | ✗        |
| L3  | T     | ✓        |

Mem W    4
         34

         65
          66
          66
          66
  R    198        no        74

Web back end