

1. Table

| Instruction | Fetch | Decode | Execute | Memory | Write Back |
|---------------------|-------------------------|-----------------|-------------------------|----------------|------------|
| addq %rax,%rbx | 11,12,14,15,16,17,19 | 5,21,22,26,27 | 31,32,33,34,35,36,37,41 | --- | 38,22 |
| rrmovq %rax,%rbx | 11,12,14,15,16,17,19 | 5,21,26 | 31,33,36,37 | --- | 38,22 |
| irmovq 5,%rbx | 11,12,14,15,17,18,19 | 4,5 | 33,36,37 | --- | 38,22 |
| Mrmovq 5(%rdx),%rax | 11,12,14,15,16,17,18,19 | 4,5,22,27 | 32,33,34,36,37 | 38,39,43,46 | 3,21 |
| rmmovq %rax,5(%rdx) | 11,12,14,15,16,17,18,19 | 4,5,21,22,26,27 | 31,33,34,36,37 | 31,38,39,40,42 | --- |
| push %rax | 11,12,14,15,16,19 | 5,21,24,26,27 | 32,34,36,37 | 31,38,39,40,42 | 38,24 |
| pop %rax | 11,12,14,15,16,19 | 5,24,26,27 | 32,34,36,37 | 31,39,43,46 | 38,24,3,21 |
| jne loop | 11,12,14,15,18,19 | 4,5 | 33,35,36,37,41 | --- | --- |
| call func | 11,12,14,15,18,19 | 4,5,24,27 | 32,34,36,37 | 38,39,40,42 | 38,24 |
| ret | 11,12,14,15,19 | 5,24,26,27 | 32,34,36,37 | 31,39,43,46 | 38,24 |
| cmovne %rax,%rbx | 11,12,14,15,16,17,19 | 5,21,26,27 | 31,32,33,34,35,36,37,41 | --- | 38,22 |

2. Table

| Instruction | icode | ifun | rA | rB | valC | valA | valB | dstE | dstM | srcA | valE | valM | Cnd |
|---------------------|-------|------|----|----|--------|--------|--------|------|------|------|--------|--------|-----|
| addq %rax,%rbx | 6 | 0 | 0 | 3 | | 1 | 2 | 3 | | 0 | 3 | | 1 |
| rrmovq %rax,%rbx | 2 | 0 | 0 | 3 | | 1 | | 3 | | 0 | 1 | | |
| irmovq 5,%rbx | 3 | 0 | F | 3 | 5 | | | 3 | | | 5 | | |
| rrmovq 5(%rbx),%rax | 5 | 0 | 0 | 3 | 5 | | 2 | 0 | | | 7 | 0 | |
| rmmovq %rax,5(%rdx) | 4 | 0 | 0 | 2 | 5 | 1 | 0x1000 | | | 0 | 0x1005 | 1 | |
| push %rax | A | 0 | 0 | F | | 1 | 0x2000 | 4 | | 4 | 0x1FF8 | 1 | |
| pop %rax | B | 0 | 0 | F | | 0x2000 | 0x2000 | 4 | 0 | 4 | 0x2008 | 2 | |
| jmp loop | 7 | 0 | | | 0x3000 | | | | | | | | 1 |
| call func | 8 | 0 | | | 0x4000 | | 0x2000 | 4 | | | 0x1FF8 | 0x0009 | |
| ret | 9 | 0 | | | | 0x2000 | 0x2000 | 4 | | 4 | 0x2008 | 2 | |
| cmovne %rax,%rbx | 2 | 3 | 0 | 3 | | 1 | 0 | 3 | | 0 | 1 | | 1 |