

Instrucciones aritméticas

$$1) x = z + 2 * 8 - (a/b) - x$$

$$t_0 = 2 * 8$$

$$t_1 = a / b$$

$$t_2 = z + t_0$$

$$t_3 = t_2 - t_1$$

$$t_4 = t_3 - x$$

$$x = t_4$$

$$2) \text{int } x(6); \dots x[j + j * 2] = a * 3 / 6$$

$$t_0 = a * 3$$

$$t_1 = t_0 / 6$$

$$t_2 = j * 2$$

$$t_3 = j + t_2$$

$$t_4 = t_3 * 4$$

$$x[t_4] = t_1$$

$$3) \text{int } x[6], y[5][3][2]; \dots x[j + j * 2] = y[i + 2][j - 1][k * 3];$$

$$t_0 = i + 2$$

$$t_1 = t_0 * 24$$

$$t_2 = j - 1$$

$$t_3 = t_2 * 8$$

$$t_4 = t_1 + t_3$$

$$t_5 = k * 3$$

$$t_6 = t_5 * 4$$

$$t_7 = t_6 + t_4$$

$$t_8 = y[t_7]$$

$$t_9 = j * 2$$

$$t_{10} = j + t_9$$

$$t_{11} = t_{10} * 4$$

$$x[t_{11}] = t_8$$

Instrucciones if, if-else, while, do-while

4) if ($x[i+2] > x[i+1]$) $a = z * 3 + y$; else $a = 2$;

```
t0 = i + 2      if t2 > t5 goto L0
t1 = t0 * 4      goto L1
t2 = x[t1]       L0: t6 = z + 3
t3 = i + 1        t7 = t6 + y
t4 = t3 * 4       a = t7
t5 = x[t4]        goto L2
                  L1: a = 2
                  L2: ...
```

5) while ($x[i+2] > x[i-1]$) { if ($y < 3$) $y = 1$; else $y = 0$; }

```
L0: t0 = i + 2    L1: if y < 3 goto L3
    t1 = t0 * 4    goto L4
    t2 = x[t1]
    t3 = i - 1     L3: y = 1
    t4 = t3 * 4    goto L0
    t5 = x[t4]     L4: y = 0
    if t2 > t5 goto L1
    goto L2        goto L0
                  L2: ...
```

6) do $i++$; $j++$; while ($x > z * 5$);

```
L0: t0 = i + 1
    i = t0
    t1 = j + 1
    j = t1
    t2 = z * 5
    if x > t2 goto L0
    goto L1
L1: ...
```