

SOLU9:

Precedence

Highest

\*, /, not

+, -, %, mod

-(unary)

=, /, <, <=, >, >=

and

or, xor

Associativity

Lowest

Left to right

a)  $a * b - 1 + c$

$$\Rightarrow (a * b)^1 \\ ((a * b)^1 - 1)^2 \\ (((a * b)^1 - 1)^2 + c)^3$$

b)  $a * (b - 1) / c \bmod d$

$$\Rightarrow (b - 1)^1 \\ (a * (b - 1)^1)^2 \\ ((a * (b - 1)^1)^2 / c)^3 \\ (((a * (b - 1)^1)^2 / c)^3 \bmod d)^4$$

c)  $(a - b) / c \% (d * e / a - 3)$

$$\Rightarrow (a - b)^1 \quad (d * e)^2 \\ ((d * e)^2 / a)^3 \\ (((d * e)^2 / a)^3 - 3)^4$$

$$((a - b)^1 / c)^5$$

$$(((a - b)^1 / c)^5 \% (((d * e)^2 / a)^3 - 3)^4)^6$$

d)  $-a \text{ or } c = d \text{ and } e$

$$\Rightarrow (-a)^1 \\ (c = d)^2 \\ ((c = d)^2 \text{ and } e)^3 \\ ((-a)^1 \text{ or } ((c = d)^2 \text{ and } e)^3)^4$$

$$e) \ a > b \text{ xor } c \text{ or } d \leq 17$$

$$\Rightarrow (a > b)^1$$

$$(d \leq 17)^2$$

$$((a > b)^1 \text{ xor } c)^3$$

$$(((a > b)^1 \text{ xor } c)^3 \text{ or } (d \leq 17)^2)^4$$

$$f) \ -a + b$$

$$\Rightarrow (-a)^1$$

$$((-a)^1 + b)^2$$

### SORU 13:

```
int fun(int *k) {
```

```
    *k += 4;
```

```
    return 3 * (*k) - 1;
```

```
}
```

```
void main() {
```

```
    int i = 10, j = 10, sum1, sum2;
```

```
    sum1 = (i/2) + fun(&i);
```

```
    sum2 = fun(&j) + (j/2);
```

```
}
```

a) Left to right

$$\text{sum1} = (i/2) + \text{fun}(\&i);$$

$\rightarrow 22$

\* önce  $(i/2)$  yapılır.

$$10/2 = 5$$

\* sonra  $i = 10$  fun'a gönderilir.

$$i += 4 \quad i = 14$$

$$14 \times 3 - 1 = 41$$

\*  $(i/2) + \text{fun}(\&i)$

$$5 + 41 = 46$$

$$\text{sum2} = \text{fun}(\&j) + (j/2);$$

$\rightarrow 22$

\* önce  $j = 10$  fun'a gönderilir.

$$j += 4 \quad j = 14 \text{ olur.}$$

$$(14 \times 3) - 1 = 41$$

\* sonra  $(j/2)$  yapılır.  $j$  ile devamla.

$$14/2 = 7$$

\*  $\text{fun}(\&j) + (j/2)$

$$41 + 7 = 48$$

b) Right to left

$$\text{sum1} = (i/2) + \text{fun}(8i);$$

RL ←

\* önce  $\text{fun}(8i)$  yapılır.

$$i = 10$$

$$10 \times 4 = 44 = i$$

$$(44 \times 3) - 1 = 131$$

\* sonra  $i/2$  yapılır.

$$i = 44$$

$$44/2 = 22$$

\* toplamı istenir;

$$131 + 22 = 153$$

$$\text{sum2} = \text{fun}(8j) + (j/2);$$

RL ←

\* önce  $j/2$  yapılır.

$$j = 10$$

$$10/2 = 5$$

\* sonra  $\text{fun}(8j)$  yapılır.

$$j = 10$$

$$10 \times 4 = 44$$

$$(44 \times 3) - 1 = 131$$

\* toplamı;

$$131 + 5 = 136$$

	<u>sum1</u>	<u>sum2</u>
Left to right :	153	136
Right to left :	136	153