# Avaliação Final – Arquitetura de Computadores I

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## Questão 01

a) **e = (a– (b–c )+f)**

```
addi $s0, $zero, 10

addi $s1, $zero, 2

add $s2, $zero, 5


sub $s4, $s1, $s2

sub $s4, $s0, $s4

add $s4, $s4, $s5
```

**b) f = e – (a – b ) + ( b – c )**

```
addi $s0, $zero, 15

addi $s1, $zero, 10

add $s2, $zero, 5

addi $s4, $zero, 10


sub $t1, $s0, $s1

sub $t1, $s4, $t1

sub $ t2, $ s1, $ s2

add $s5, $t1, $t2
```

**c) a = b [15] – c;**

```
.data
b: .word  1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

.text

la $s1, b
```

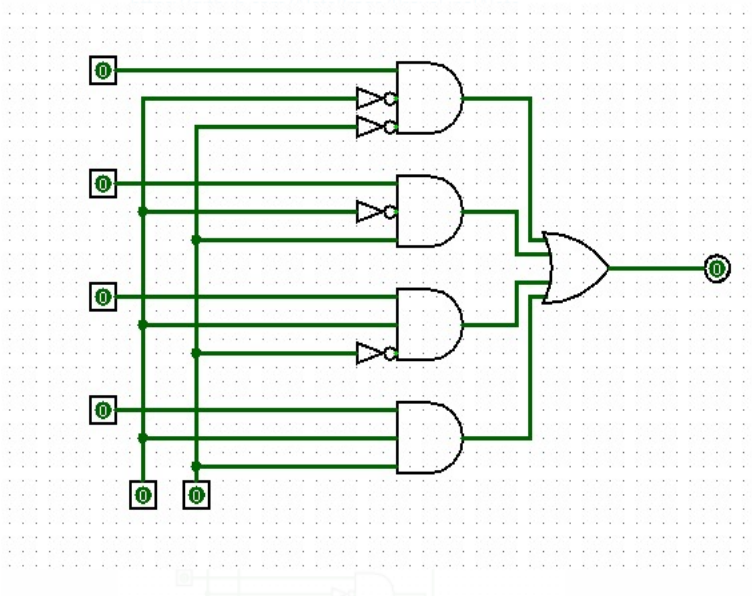
```
addi $s2, $zero, 9

addi $t1, $zero, 15
add $t2, $t1, $t1
add $t2, $t2,$t2

add $t2, $t2, $s1

lw $t3, 0($t2)

sub $s0, $t3, $s2
```

## d) a [10] = b – c;

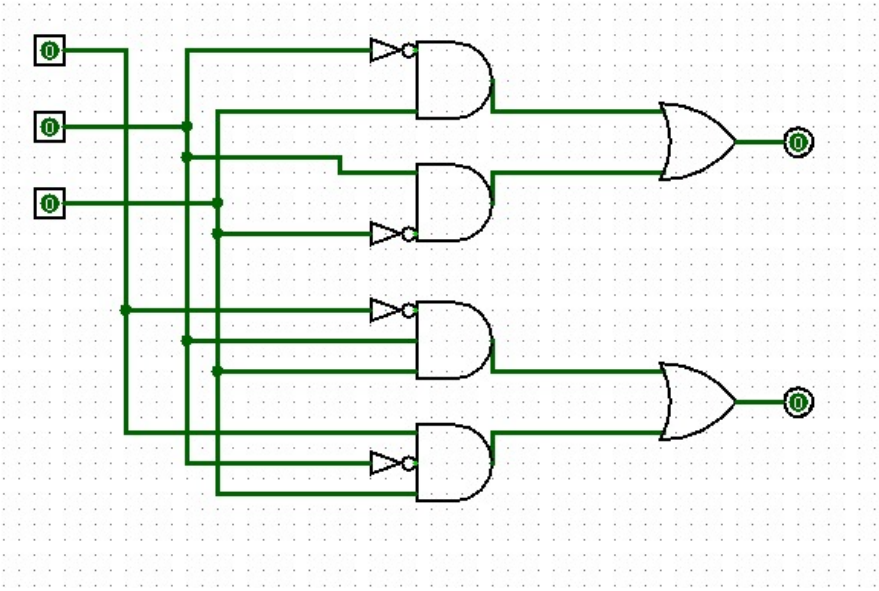
```
.data
a: .word  1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

.text

la $s0, a

addi $s1, $zero, 14
addi $s2, $zero, 9

sub $t2, $s1, $s2

sw $t2, 10($s0)
```

## Questão 02:

**a)**



**b)**



## Questão 03

O Benvert alterna o circuito entre o meio **somador** e **subtrator**.

**Somador - Binv = 0**
**Subtrator - Binv = 1**