

CS202

Homework2

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2.10

```
A[1]=A;  
f=A+A;
```

2.12

2.12.1 **0x00000000**

2.12.2 **No, it has been overflow.**

2.12.3 **0xb0000000**

2.12.4 **Yes, it is the desired result.**

2.12.5 **0x00000000**

2.12.6 **No, it has been overflow.**

2.14

Type: **R-type instruction(addition).**

Instruction: `add $s0, $s0, $s0`

2.16

Type: **R-type instruction(subtraction).**

Instruction: `sub $v1, $v1, $v0`

Binary: **000000 00011 00010 00011 00000 100010**

2.19

$\$t0 = 0xAAAAAAAA = 0b1010_1010_1010_1010_1010_1010_1010_1010$

$\$t1 = 0x12345678 = 0b0001_0010_0011_0100_0101_0110_0111_1000$

2.19.1 After the first instruction (`sll $t2, $t0, 4`) $\$t2 = 0xAAAAAAAA0$

After the second instruction (`or $t2, $t2, $t1`)

$\$t2 = 0b1011_1010_1011_1110_1111_1110_1111_1000 = 0xBABEF8$

So the final answer is **$\$t2 = BABEF8$**

2.19.2 **$\$t2 = 0xAAAAAAAA0$**

2.19.3 After the first instruction (`srl $t2, $t0, 3`) `$t2=0x15555555`

After the second instruction (`andi $t2, $t2, 0xFFEF`) `$t2=0x00005545`

So the final answer is **`$t2=0x00005545`**.

2.23 `$t2=0x00000003`