

Question 1:

```
.data
newline: .asciiz "\n"
prompt: .asciiz "Enter number: "
output: .asciiz "Output is: "
.text
```

```
print_prompt:
    la $a0, prompt
    li $v0, 4
    syscall
    jr $ra
print_nl:
    li $v0, 4
    la $a0, newline
    syscall
    jr $ra
print:
    li $v0 4
    la $a0 output
    syscall
    jr $ra
```

```
main:
    jal print_prompt
    li $v0 5      #read one int
    syscall
    move $t1 $v0 #save first number

    jal print_prompt
    li $v0 5
    syscall
    move $t2 $v0 #save second number

    add $t0 $t1 $t2
    sll $t0 $t0 1

    mul $t3 $t1 $t2
    add $t0 $t0 $t3

    jal print
    move $a0 $t0
    li $v0 1
    syscall

    jal print_nl
    li $v0 10
    syscall
```

Question 2:

```
.data
```

```
.data
.text
main:
```

```
li $t0 7 #y =7
```

```
li $t1 2
li $t2 4
li $t3 6
beq $t1 $s1 L1 //s1 means x
beq $t2 $s1 L2
beq $t3 $s1 L3
j def
```

```
L1: addu $t0 $t0 4 #y+=4
L2: li $t4 3
    add $t0 $t0 $t4 #y+=3
    j Exit #break
L3: li $t4 2
    add $t0 $t0 $t4 #y+=2
    j Exit #break
def: li $t4 1
    add $t0 $t0 $t4 #default y+=1
    j L1
    Exit
```

```
Exit: li $v0 10 #exit
      Syscall
```

Question 3:

```
t0 =3
t1 =2
t2 = 8
t3 = 0/undefined
PC = 0x0
```

```
int foo(){
}
```

```
Int foo(){
    Return 1;
}
$ra: 0x8020
$ip :
Int main(){
    Foo(); --àjal foo
}
```