Activitat 3.A: Declaració de matrius

```
        .data

        .align 2
mat1:   .space 120
mat2:   .space 15
        .align 3
mat3:   .space 32
mat4:   .word 2, 3, 1, 2, 4, 3
```

Activitat 3.B: Accés als elements d'una matriu

3.2:
@mat1[4][3] = @mat1 + (4*6+3)*4 = @mat1 + 108
@mat2[2][4] = @mat2 + (2*5+4) = @mat2 + 14
@mat3[1][0] = @mat3 + (1*2)*8 = @mat3 + 16
@mat4[0][2] = @mat4 + 2*4 = @mat4 + 8

3.3:

```
        .data

mat1:   .space 120
mat4:   .word 2, 3, 1, 2, 4, 3
col:    .word 2

        .text
        .globl main
main:
        addiu $sp, $sp, -4
        sw $ra, 0($sp)
        la $a0, mat4
        la $a2, col
        lw $a2, 0($a2)
        lw $a1, 8($a0)
        jal subr
        la $t0, mat1
        sw $v0, 108($t0)
        la $a0, mat4
        li $a1, 1
        li $a2, 1
        jal subr
        la $t0, mat1
        sw $v0, 0($t0)
        lw $ra, 0($sp)
        addiu $sp, $sp, 4
        jr $ra
```

3.4:

```
subr:
```

```
        la $t0, mat1
        li $t1, 24
        mult $a2, $t1
        mflo $t1
        addu $t0, $t0, $t1
        li $t1, 3
        mult $a1, $t1
        mflo $t1
        addu $t1, $t1, $a2
        sll $t1, $t1, 2
        addu $t1, $a0, $t1
        lw $t1, 0($t1)
        sw $t1, 20($t0)
        move $v0, $a1
        jr $ra
```

Activitat 3.C: Accés seqüencial a la columna d'una matriu

3.5:

@mat[i][2] = @mat + (i*6+2)*4 = @mat + 24i + 8

@mat[i+1][2] - @mat[i][2] = (i = 1) (2*6+2)*4 - (i = 0) (1*6+2)*4 = 56 – 32 = 24 bytes

3.6:

```
        .data
mat:    .word 0, 0, 2, 0, 0, 0
        .word 0, 0, 4, 0, 0, 0
        .word 0, 0, 6, 0, 0, 0
        .word 0, 0, 8, 0, 0, 0
resultat: .word 0

        .text
        .globl main
main:
        addiu $sp, $sp, -4
        sw $ra, 0($sp)
        la $a0, mat
        jal suma_col
        la $t0, resultat
        sw $v0, 0($t0)
        lw $ra, 0($sp)
        addiu $sp, $sp, 4
        jr $ra

suma_col:
        li $t0, 0
        move $t1, $a0
        addiu $t1, $t1, 8
        li $t2, 0
        li $t3, 4
```

```
for:    beq $t2, $t3, fi_for
        lw $t4, 0($t1)
        addu $t0, $t0, $t4
        addiu $t1, $t1, 24
        addiu $t2, $t2, 1
        b for

fi_for: move $v0, $t0
        jr $ra
```