

Last name: First name: Group:

ANSWER SHEET TO BE HANDED IN

Exercise 1

| Instruction | Memory | Register |
|-------------------------------|--|------------------------------------|
| Example | \$005000 54 AF 00 40 E7 21 48 C0 | A0 = \$00005004 A1 = \$0000500C |
| Example | \$005008 C9 10 11 C8 D4 36 FF 88 | No change |
| MOVE.W #18, -6(A2) | \$005008 C9 10 00 12 D4 36 1F 88 | No change |
| MOVE.W \$5004, 3(A0, D0.W) | \$005008 C9 10 E7 21 D4 36 1F 88 | No change |
| MOVE.B 5(A1), \$18(A1, D1.L) | \$005008 C9 10 11 C8 D4 36 1F 36 | No change |
| MOVE.L -\$8(A1), -1(A2, D2.W) | \$005008 C9 10 11 C8 54 AF 18 B9 | No change |

Exercise 2

| Operation | Size (bits) | Missing Number (hexadecimal) | N | Z | V | C |
|--------------|-------------|------------------------------|---|---|---|---|
| \$7F + \$? | 8 | \$01 | 1 | 0 | 1 | 0 |
| \$98BD + \$? | 16 | \$6743 | 0 | 1 | 0 | 1 |
| \$98BD + \$? | 32 | \$80000000 | 1 | 0 | 0 | 0 |

Exercise 3

| | |
|---|------------------------|
| Values of registers after the execution of the program. Use the 32-bit hexadecimal representation. | |
| D1 = \$00000001 | D3 = \$00002206 |
| D2 = \$00000022 | D4 = \$0000000B |

Exercise 4

```
CopyInc    movem.l  d0/a1/a2,-(a7)

\loop     move.b   (a1)+,(a2)+
          subq.l   #1,d0
          bne     \loop

          movem.l  (a7)+,d0/a1/a2
          rts
```

```
CopyDec    move.l   d0,-(a7)

          adda.l   d0,a1
          adda.l   d0,a2

\loop     move.b   -(a1),-(a2)
          subq.l   #1,d0
          bne     \loop

          move.l   (a7)+,d0
          rts
```

```
Copy       tst.l    d0
          beq     \quit

          cmpa.l   a1,a2
          beq     \quit
          blo     \inc

\dec       jsr     CopyDec
          rts

\inc       jsr     CopyInc
\quit     rts
```