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ECE 242

Exercise #4

1. Value at memory location $1000 is #2 and value at memory location $1002 is #4

```
ORG $1000
START:
    MOVE.W 1002, D1
    ADD.W 1000, D1
    MOVE.W D1, $1004
```

2.

a. 4241

Instruction	Size	Mode	Register
0100 0010	01	000	001

CLR.W D1

b. 200B

Instruction	Size	Register	Mode	Mode	Register
00	10	000	000	001	011

MOVE.L A3, D0

c. 103C 002E

Instruction	Size	Register	Mode	Mode	Register
00	01	000	000	111	100

MOVE.B #$2E, D0

3. If (D1) = $FFFF 0000, the instruction CLR.B D1 yields
   a) $0000 0000
   b) $FFFF FF00
   c) $FFFF 0000

   Choose your answer(s) from above choices from a) to c), and explain your answer

CLR.B clears the first byte from D1.

4. The address mode for the source operand in the instruction MOVE.L -(A7), D1 is
   a) Postincrement
   b) Register indirect
   c) Stack addressing

   Choose your answer(s) from above choices from a) to c), and explain your answer

A7 is reserved for stacks and cause of the negative sign.

5. Assume that (A1) = 1050, (1050) = $ABCD, and (D1) = $F0F0 EFEE
   The result of the instruction MOVE.W (A1), D1 is
   a) (D1.W) = $ABCD
   b) (D1.W) = 1050
   c) (D1.L) = $0000 ABCD

   Choose your answer(s) from above choices from a) to c), and explain your answer

A1 value to D1, A1 = 1050= $ABCD. Therefore, D1. W= $ABCD