Problem 2:

x2

OP CODE (1 bits)	OP1 (2 bits)	OP2 (2 bits)	OP3 (2 bits)

x3

OPCODE (2 bits)	OP1 (2 bits for the register + 3 bits for displacement)

x3

OPCODE (2 bits)	OP1 (6 bits for direct addressing to memory)

1. Yes, because depending on the lenght in bits of the OPCODE, it will know how many operands it's going to use, and depending on the OPCODE (when it has 2 bits), it will address direct to memory or on a relative way.
2. 2^6 = 64 different memory positions.

Problem 3:

LOAD AC <- A

ADD AC <- AC + B

SUB AC <- AC – D

DIV AC <- AC/B

DIV AC <- AC/D

STORE X <- AC