

Question 3

③b Main proc - The proc directive indicates the beginning of a procedure

MOV AX, 4710h - The MOV instruction copies the register 4710h to the AX register

ADD EAX, 1270 - The ADD instruction adds 1270 to the EAX register

MOV DS, AX

MAIN ENDP - The main ENDP is the last statement in the main program. It indirectly causes a predefined MS-DOS interrupt to occur, which holds the program.

Question 1

~~③a Because the addresses coded in the instructions would have to be updated whenever new variables were inserted before existing ones~~

③a When an assembly-language program is assembled, the first translation that the assembler comes out is essentially the construction of the text segment and the data segment. The stack grows and shrinks along with functions calls and returns during execution so it doesn't need to be built by the assembler.

During the time the assembler is reading through and translating an assembly language program, it always keeps track of where it is currently assembling to the text segment, the uninitialized part of the data segment, or the so-called uninitialized locally zero-initialized part of the data segment.

QUESTION 3 Cont. ↓

value 1	Byte	60h
Label	Directive	INITIALIZE

This tells the system to store byte 60h
under value 1 label
(it is an uninitialized)

(1) label 2 Duff? - This is an uninitialized
variable and its value will be assigned at runtime

Question 2

(19) portability in programming language refers to why a program can be used on other operating systems other than the original one. It was intended for without needing major changes to the codes.

(20) NO it is not because each assembly is for a specific computer or processor processor.

(20)

	31	16 15	7 0	
EAX		AH	AL	AX Accumulator
EBX		BH	BL	BX Base
ECX		CH	CL	CX Counter
EDX		DH	DL	DX Data

(21) The assembly language for x86 processors are not NOT the same for other computer systems + such as ARM or Motorola because each assembly has its own specific processor or computer.

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QUESTION

(a) Because the addresses coded in the instructions would have to be updated whenever ~~new~~ new variables were inserted before exiting and

(b) ~~Object and Listing Files~~
Object .Obj and Listing Files