Problem 1

Variable	Address	Byte Data
Rose (BYTE)	0x0072A300	0x11
Magnolia (WORD, low byte)	0x0072A301	0x34
Magnolia (WORD, high byte)	0x0072A302	0x12
Canvas (DWORD, low byte)	0x0072A303	0xCD

Problem 2

Memory Address Computations

1. mov [gamma], eax
EA = 0A740010h

2. mov esi, [gamma]
EA = 0A740010h

3. mov eax, beta[esi] (with ESI = 4)
EA = 0A740008h + 4 = 0A74000Ch

4. mov eax, 4[ebx] (with EBX = 0A740000h)
EA = EBX + 4 = 0A740004h

5. mov eax, [ebx] (with EBX = 0A740000h)
EA = EBX = 0A740000h

6. mov eax, [ebx+esi+4] (with EBX = 0A740000h, ESI = 4)
EA = EBX + ESI + 4 = 0A740008h

Problem 3

main.asm

```
TITLE Sum of Array (main.asm)
INCLUDE Irvine32.inc

.data
   CloudArray  SWORD  11, 24, 3, 4, 15, 2, 7, 8, 19

.code
main PROC

   xor  eax, eax
   mov  ecx, LENGTHOF CloudArray
   mov  esi, OFFSET CloudArray

displayAndSum:
   movsx edx, SWORD PTR [esi]

   push eax
   mov  eax, edx
   call WriteDec       ; I use 'WriteDec' to avoid signing the integers.
   call Crlf
   pop  eax

   add  eax, edx

   add  esi, TYPE SWORD

   loop displayAndSum

   call WriteDec       ; See above comment.
   call Crlf

   exit
main ENDP
END main
```

Microsoft Visual Studio Debu

```
11
24
3
4
15
2
7
8
19
93

C:\Users\yoloe\source\repos\HW5\De
Press any key to close this window
```