Quiz#3

Due Nov 24 at 11:59pm **Points** 50 **Questions** 9

Available Nov 21 at 12am - Nov 24 at 11:59pm 4 days Time Limit 60 Minutes

Instructions

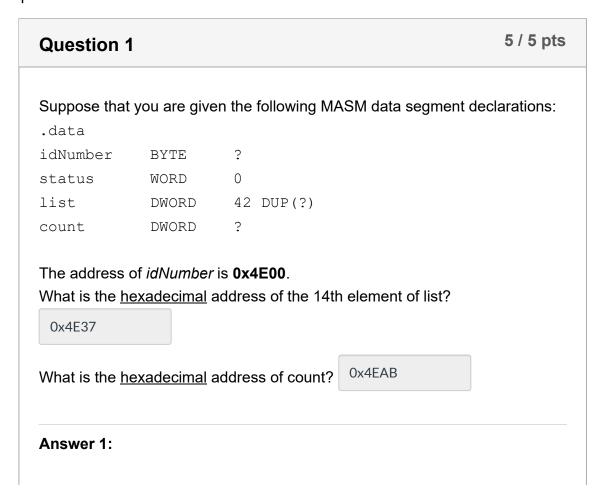
You have 60 minutes to complete this quiz. Once you being the quiz you must complete it in one session.

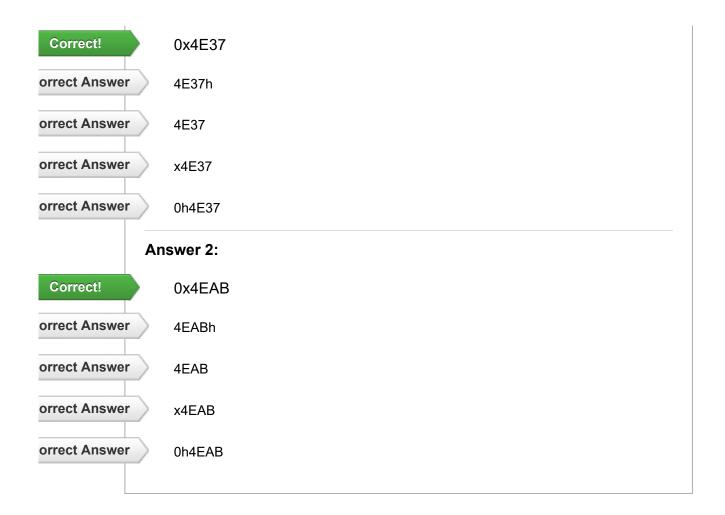
For this quiz, you are allowed to refer to your notes/textbook, as well as use any calculator.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	24 minutes	50 out of 50

Score for this quiz: **50** out of 50 Submitted Nov 23 at 5:52pm This attempt took 24 minutes.





Question 2 5 / 5 pts

Assume that **LO** and **HI** have already been assigned as constants with **LO** < **HI**, and **x** has been declared as **DWORD** in the data segment. Also, Irvine's library is included, and *Randomize* has already been called. Which of the following code fragments will assign to **x** a "random" integer in the range **[LO** .. **HI]**? Check all that apply.

```
LO
  push
  push
         ΗI
  call
        RandomRange
pop
  mov
        eax,HI
  call
        RandomRange
  mov
        x,eax
        eax,L0
  mov
  call RandomRange
sub
        x,eax
```

```
Correct!
                             eax,HI
                    mov
                     sub
                             eax, LO
                     inc
                             eax
                     call
                             RandomRange
                     add
                             eax,L0

✓ mov

                             x, eax
Correct!
                    mov
                             eax, HI
                             ebx,L0
                    {\tt mov}
                             ebx
                     dec
                     sub
                             eax, ebx
                     call
                             RandomRange
                     add
                             eax,L0

✓ mov

                             x, eax
```

This information is provided so that you can answer answer questions 3 through 7.

The following is a partial main with a call to a procedure to calculate the factorial of integer argument x, and store the result (xI) in memory.

- The initial address of the top of the stack is 0x0A50.
- The value at x is 12 (decimal).
- The address of result (DWORD) is 0x1200.
- The address of nextStep is 0x2080.
- The initial value in ebp is 0x3B.

```
main PROC
push OFFSET result
push x
call factorial
nextStep:
; ...
exit
main ENDP
```

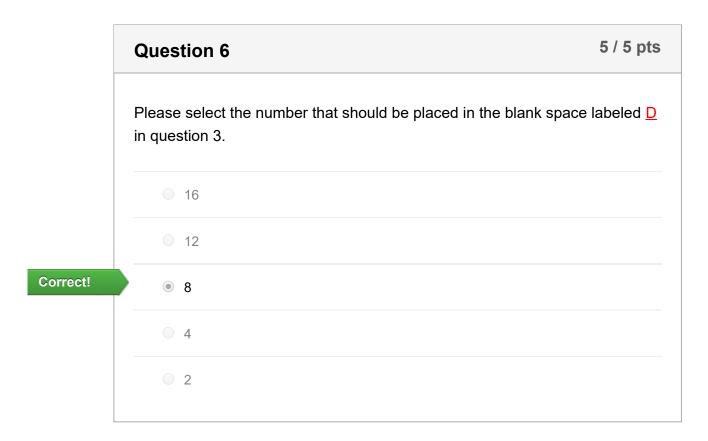
```
factorial
            PROC
      push ebp
      mov
            ebp,esp
      mov
            eax,1
                                 ; value of parameter x
      mov
            ecx,
again:
      mul
            ecx
            again
      loop
            edi,
                                  ;address of result
      mov
                                  ; save the factorial in result
      mov
            ebp
      pop
                   D
factorial
            ENDP
END
      main
```

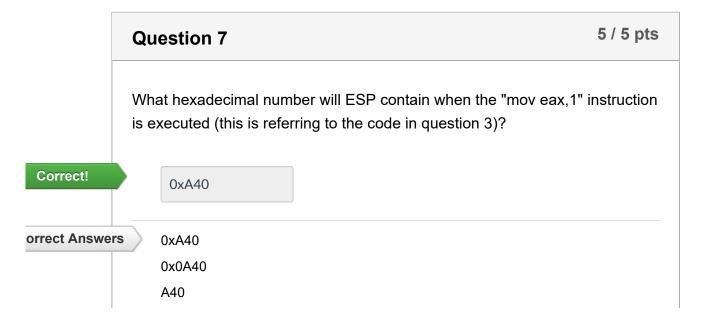
Question 3 Please select the text that should be placed in the blank space labeled ▲ in question 3. [edi] [ebp+12] 0x2080 Correct! [ebp+8]

Please select the text that should be placed in the blank space labeled B in question 3. Ox2080 [ebp+12] [ebp+8] [edi]

Question 5 Please select the text that should be placed in the blank space labeled C in question 3.

	[ebp+8]
	[ebp+12]
Correct!	● [edi]
	Ox2080





0A40	
0h0A40	
0A40h	
A40h	

Question 8	10 / 10 pts
------------	-------------

Based on the code given below, please show the *decimal* contents of the array after execution has completed.

Array Contents:

0x2200: 8

0x2204: 16

0x2208: ²⁵

0x220C: 35

The address of array is 0×2200 . Show the (<u>decimal</u>) contents of array after execution returns to label retAdd:

```
MAXSIZE = 4
.data
array DWORD MAXSIZE DUP(?)
.code
main PROC
push MAXSIZE
push 8
push OFFSET array
call whatzit
retAdd:
; ...
exit
main ENDP
```

```
whatzit PROC
       push ebp
       mov
             ebp,esp
       mov
             edi,[ebp+8]
       mov
             eax,0
       mov
             ebx,[ebp+12]
       mov
             ecx,[ebp+16]
             edx,0
       mov
fill:
        add eax,ebx
       mov [edi+edx],eax
        inc ebx
        dec eax
        add edx,4
        loop fill
       pop
             ebp
        ret
             12
whatzit ENDP
```

You may find it helpful to produce a table similar to the following example, filling in the blanks for each iteration of the loop

filling in the blanks for each iteration of the loop.					
eax	ebx	ecx	edx	edi	

Ar	າຣ	W	е	r	1	:

Correct!

8

Answer 2:

Correct!

16

Answer 3:

Correct!

25

Answer 4:

Correct!

35

Question 9

5 / 5 pts

Which of the following postfix expressions corresponds to the given infix expression?

$$(1 + 4 / 2 + 1 + 2) * 3 / 2$$

Correct!

- 142/+1+2+3*2/
- 142+/1+2+3*2/
- 142/+1+23+*2/
- 142/+1+2+3/2*

Quiz Score: 50 out of 50