For the following segment, what is SIZEOF myChecker (in decimal - ignore the .0000 from Canvas)

```
.data
myChecker   BYTE   12h,
                   34h,
                   56h,
                   78h,
                   90h
```

5

The _____ operator returns a value that is equivalent to multiplying the number of elements in a single data declaration by the size, in bytes, of a single element of a data declaration.

- TYPE
- OFFSET
- LENGTHOF
- SIZEOF
- PTR

The _____ operator returns the distance in bytes, of a label from the beginning of its enclosing segment, added to the segment register.

- SIZEOF
- PTR
- TYPE
- LENGTHOF
- OFFSET

Storing a string byte using string primitives increments/decrements which register?

- EDX
- ESI
- ESP
- EDI

Match the string primitive to its purpose.

Load string byte

lodsb

Store string byte

stosb

Clear direction flag

cld

Set direction flag

std

Suppose that you are given the following partial data segment, which starts at address offset 0x1000 :

```
.data
idArray WORD 3546, 1534, 12, 3481, 154, 6423
x DWORD LENGTHOF idArray
y DWORD SIZEOF idArray
z DWORD TYPE idArray
```

x contains what value, in decimal? (Ignore the .0000 from Canvas)

6

Suppose that you are given the following partial data segment, which starts at address 0x0700 :

```
.data
idArray DWORD 1800, 1719, 1638, 1557, 1476, 1395, 1314, 1233, 1152, 1071, 990
u DWORD LENGTHOF idArray
v DWORD SIZEOF idArray
```

What value does EAX contain after the following code has executed? (Ignore the .0000 that Canvas sticks on the end)

```
mov   esi, OFFSET idArray
mov   eax, [esi+8*TYPE idArray]
```

1152

Suppose that you are given the following partial data segment, which starts at address offset 0x1000 :

```
.data
idArray WORD 3546, 1534, 12, 3481, 154, 6423
x DWORD LENGTHOF idArray
y DWORD SIZEOF idArray
z DWORD TYPE idArray
```

What is the hexadecimal OFFSET of the number "12" in *idArray*?

1004

Given the following array declaration:

```
.data
matrix   DWORD   50 DUP(10 DUP(?))
```

If **matrix[0][0]** is the 0th sequentially stored BYTE in memory, which sequentially stored BYTE is the first byte corresponding to matrix[10][4]? (in decimal - ignore the .0000 from Canvas)

416

Assume that your program has access to the following data segment (starting at address 0x310):

```
.data
id        DWORD  7
matrix    WORD   50 DUP(10 DUP(?))
```

What is the hexadecimal address of matrix[7][3] (the 4th element of the 8th row)?

x03A6

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

```
56 / (42 * 2.6 * 2) + (256 / (128 - 64)) * 3 ^ 12
```

- 56 42 2.6 * 2 * / 256 128 64 - / 3 12 * ^ +
- 56 42 2.6 * 2 * 256 /128 64 - / 3 12 ^ * +
- 56 42 2.6 * 2 * / 256 128 64 - 3 12 / ^ * +
- **56 42 2.6 * 2 * / 256 128 64 - / 3 12 ^ * +**

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

```
4 5 + 5 ^ 3 4 / -
```

- (4 + 5) ^ (5 - 3) / 4
- 4 + 5 ^ 5 - 3 / 4
- **(4 + 5) ^ 5 - 3 / 4**
- (4 + 5) ^ 5 / 3 - 4

Which of the following FPU manipulations corresponds to the given infix notation?

```
Z = (A + B - C) / D * E
```

-
```
finit
fld    A
fld    B
fadd
fld    C
fsub
fld    D
fdiv
fld    E
```

```
fmul
fstp
```

```
finit
fld    A
fld    B
fadd
fld    C
fsub
fld    D
fmul
fld    E
fdiv
fstp   Z
```

```
finit
fld    A
fld    B
fsub
fld    C
fadd
fld    D
fdiv
fld    E
fmul
fstp   Z
```

```
finit
fld    A
fld    B
fadd
fld    C
fsub
fld    D
fdiv
fld    E
fmul
fstp   Z
```

3rd one wrong

The _____ operator returns the size, in bytes, of a single element of a data declaration.

- SIZEOF
- OFFSET
- TYPE
- LENGTHOF

- PTR

MASM will throw an error when assembling the following data segment:

```
.data
myChecker   BYTE   12h
            BYTE   34h
            BYTE   56h
            BYTE   78h
            BYTE   90h
```

- True
- False

Which of the following is the correct addressing formula for matrix index $M_{r,c}$Mr,c?

- $BaseAddress + elementsPerColumn \cdot [(c \cdot elementSize) + r]$
- $BaseAddress + elementSize \cdot [(c \cdot elementsPerColumn) + r]$
- $BaseAddress + elementSize \cdot [(r \cdot elementsPerRow) + c]$
- $BaseAddress + elementsPerRow \cdot [(r \cdot elementsSize) + c]$

If the string direction flag is not set, string operations will move backward through the string.

- True
- False

Suppose that you are given the following partial data segment:

```
.data
myPtrCheck   BYTE   12h, 34h, 56h, 78h,
                    90h, ABh, CDh, EFh
.code
...
mov   eax, DWORD PTR [myPtrCheck+2]
```

EAX contains what value, in hexadecimal?

AB907856h

0hAB907856

xAB907856

AB907856

0xAB907856

Given the following array declaration, how many bytes of memory does array *matrix* require? (in decimal - ignore the .0000 from Canvas)

```
.data
matrix   WORD   13 DUP(15 DUP(?))
```

390

Given the following array declaration:

```
.data
matrix   DWORD   50 DUP(10 DUP(?))
```

If **matrix[0][0]** is the 0th sequentially stored BYTE in memory, which sequentially stored BYTE is the first byte corresponding to matrix[3][7]? (in decimal - ignore the .0000 from Canvas)

148

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

```
(13 + 14 - 3 + 2) / 2 ^ 3
```

- 13 14 + 3 - 2 + 2 3 / ^
- 13 14 + 3 - 2 + 2 3 ^ /
- 13 14 + 3 2 + - 2 3 ^ /
- 13 14 + 3 2 - + 2 3 ^ /

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

```
3 5 4 2 3 6 / * - ^ +
```

- (3 + 5) ^ (4 - 2 * 3 / 6)
- 3 + 5 ^ (4 - 2 * 3 / 6)
- 3 / 5 * (4 - 2 ^ 3 + 6)

- 3 + 5 ^ 4 - 2 * 3 / 6

Which of the following infix notations corresponds to the given FPU manipulations? A B / C D - * E -

```
finit
fld    A
fld    B
fdiv
fld    C
fld    D
fsub
fmul
fld    E
fsub
fstp   Z
```

- Y = A * B / (C - D) - E
- Y = A / B * (C - D) - E
- Y = A / B * C - D - E
- Y = A / B * (C - D - E)