

Drag-and-drop the correct sequence number of the assembly code to form a program where 7 numbers in an array are added and stored in eax register. Note that your sequence must absolutely match the line numbers to the left-most column of the table. The answers for Lines 2, 3 and 5 have been provided. Complete the rest.

Line 1	<code>mov esi, array</code>	✗ #lea esi, array#
Line 2	<code>mov eax, 0</code>	
Line 3	<code>mov ecx, 0</code>	
Line 4	<code>sumLoop: add eax, [esi]</code>	✓
Line 5	<code>add esi, 4</code>	
Line 6	<code>inc ecx</code>	✓
Line 7	<code>cmp ecx, 7</code>	✓
Line 8	<code>jl sumLoop</code>	✓

[jnl sumLoop] [inc ecx] [dec ecx] [lea esi, array] [jl sumLoop] [sumLoop: add eax, [esi]] [cmp ecx, 7] [mov esi, array]

Your answer is partially correct.

Drag-and-drop the correct arguments and/or instructions to the missing places in the following program segment to push a string onto a stack.

```
char ✓ myArray[MAX_SZ] = "Hello XJTLU";

_asm ✓ {
    mov ecx, MAX_SZ-1 ✓
    mov esi, 0 ✓

    cycleIt: ✓
        movzx ✓ eax, myArray[esi] ✓
        push ✓ eax
        inc ✓ esi
        loop ✓ cycleIt
}
```

[loop] [asm] [push] [cycleIt] [esi] [movzx] [MAX\_SZ] [esi] [inc] [char] [mov] [dec] [\_asm] [0] [MAX\_SZ-1] [jmp] [pop] [ecx]

Drag-and-drop the correct sequence number of the assembly code to form a program that sorts an array of 7 integers in an **ascending** order (Bubble Sort). Note that your sequence must absolutely match the line numbers to the left-most column of the table. Complete Lines 4, 7-10.

Line 1	<code>lea esi, array</code>	
Line 2	<code>mov ecx, 7</code>	
Line 3	<code>outerLoop: mov edx, ecx</code>	
Line 4	<code>innerLoop: cmp edx, ecx</code>	✓
Line 5	<code>jz noExchange</code>	
Line 6	<code>mov eax, [esi + ecx * 4 - 4]</code>	
Line 7	<code>mov ebx, [esi + edx * 4]</code>	✗ #mov ebx, [esi + edx * 4 - 4]#
Line 8	<code>cmp ebx, eax</code>	✓
Line 9	<code>jnl noExchange</code>	✗ #jnl noExchange#
Line 10	<code>mov [esi + edx * 4], ebx</code>	✗ #mov [esi + edx * 4 - 4], ebx#
Line 11	<code>mov [esi + edx * 4 - 4], eax</code>	
Line 12	<code>noExchange: dec edx</code>	
Line 13	<code>jnz innerLoop</code>	
Line 14	<code>loop outerLoop</code>	

[mov [esi + ecx \* 4 - 4], ebx] [cmp ebx, eax] [jnl noExchange] [jl noExchange] [innerLoop: cmp edx, ecx] [mov ebx, [esi + edx \* 4 - 4]] [mov ebx, [esi + edx \* 4]] [mov [esi + ecx \* 4], ebx]

Your answer is partially correct.

Drag-and-drop the correct arguments and/or instructions to the missing places for the following program that sums all the numbers in an array.

```
int arraySize = 5;
int intArray[ arraySize ] = {12, 3, 7, 23, 9};
int totalAmt = 0;

asm{
    lea edi, intArray
    mov ecx, arraySize
    mov eax, totalAmt

    addTotalAmt :
        add eax, [edi]
        add edi, 4
        loop addTotalAmt

    mov totalAmt, eax
}
```

movzx intArray loop arraySize-1 totalAmt arraySize add addTotalAmt 4 [intArray] lea 0 jmp 8