Problem 2. (10 points):

Consider the following assembly code for a C `for` loop:

```
decode_me:              y        x
        cmpl    %esi, %edi
        jle     .L5
        leal    (%rdi,%rdi), %edx
        movl    $1, %eax
        subl    %esi, %edx
.L4:
        subl    $1, %edi
        addl    $4, %esi
        addl    %edx, %eax
        subl    $6, %edx
        cmpl    %esi, %edi
        jg      .L4
        addl    $46, %eax
        ret
.L5:
        movl    $47, %eax
        ret
```

(handwritten annotations:)

edi − esi   x − y

x − 1
y + 4

edx + eax
edx − 6
        edi − esi   x + result

eax + 46   x − 6

Based on the assembly code above, fill in the blanks below in its corresponding C source code. (Note: you may only use the symbolic variables x, y, and `result` in your expressions below — *do not use register names.*)

```
int decode_me(int x, int y)
{
    int result;

    for (result = 1;  y <= x  ; x--,y = y + 4 ) {

        x += result - 6 ;

    }

    return  result + 46  ;
}
```