

**Problem 17. (8 points):**

Consider the source code below, where M and N are constants declared with #define.

```
int array1[M][N];
int array2[N][M];

void copy(int i, int j)
{
    array1[i][j] = array2[j][i];
}
```

Suppose the above code generates the following assembly code:

```
copy:
    pushl %ebp
    movl %esp,%ebp
    pushl %ebx
    movl 8(%ebp),%ecx
    movl 12(%ebp),%eax
    leal 0(,%eax,4),%ebx
    leal 0(,%ecx,8),%edx
    subl %ecx,%edx
    addl %ebx,%eax
    sall $2,%eax
    movl array2(%eax,%ecx,4),%eax
    movl %eax,array1(%ebx,%edx,4)
    popl %ebx
    movl %ebp,%esp
    popl %ebp
    ret
```

What are the values of M and N?

M =

N =