

# CSE 220 Project 2: Programming with C

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### Question 3

Input	Output
15	17
29	18
259	122
400	27
19999	66
30000	178

### Question 4

#### Question 4.1 Code Explanation

The delay is introduced with in the `sleep2()` function. Essentially, A `goal` clock time is calculated by multiplying the input into `sleep2()` by however many `CLOCKS_PER_SEC` your system runs, then adds that number to the current clock time. After which a while loop executes until the current clock time can catch up to the `goal`.

#### Question 4.2 I/O Table

Input	Clocks	Milliseconds
15	30	0.03000
29	46	0.04600
259	195	0.19500
400	46	0.04600
19999	104	0.10400
30000	269	0.26900

## Question 5

### Question 5.1 Manual Trace I/O Table

	Variable	Value	Variable	Value
Input	f	7	g	8
Output	x	1	y	1
	i	10	j	11
	x	1	y	-58

### Question 5.2 Program Execution I/O Table

	Variable	Value	Variable	Value
Input	f	7	g	8
Output	x	1	y	1
	i	10	j	11
	x	1	y	-58

### Question 5.3 C Code After Macro Processing of `mac( i, j)`

```
y = i * i + j * j - 2 * i * j
```

### Question 5.4 C Code After Macro Processing of `mac(++i, ++j)`

```
y = ++i * ++i + ++j * ++j - 2 * ++i * ++j
```