

Problem 4 (10 points)

Consider the following code:

```
void func1(int& x) {
    int y = computeY();
    x += y;
    long_running_func_to_do_other_stuff();
}
void func2(int& x) {
    int z = computeZ();
    x = 2*x - z;
    another_long_running_func();
}
...
int x = 0;
...
std::thread t1 = new std::thread(func1, ref(x));
usleep(100000);          /* Delays for 100 milliseconds */
std::thread t2 = new std::thread(func2, ref(x));
t1.join();
t2.join();
std::cout << "The value of x is " << x << std::endl;
```

Is the value that will be printed for x deterministic? If so, explain why; if not, explain why and modify the code to fix the problem. You may assume that `computeY` and `computeZ` are deterministic.