Sometimes on Friday, we’ll give you one of these quick-checks. These are NOT graded. We’re experimenting with how exactly these will work; part of their purpose is to give the course staff feedback on your performance, part of their purpose is to maintain a record of recitation attendance. Please state your name and recitation section clearly, give it your best shot and hand this paper in to your TA when you’re done.

Name:

Andrew ID:

Section (circle one): A B C D E F G H

Simplicio and Sagredo (you) are a couple of 122 students. They are trying to complete an exercise, but are a bit stuck. Help them out!

Here’s some code that Simplicio wrote, but he’s unable to fill in the blanks. Show him that Sagredo is much smarter than he is!

1 factorial (int n)
2 //@requires n >= __;
3 {
4     int result = 1;
5     while(_______)
6         //@loop_invariant __________;
7         {
8             result = result * n;
9             n = ________;
10         }
11     return ________;
12 }

Salviati, one of the TAs, now gives them a 'magic' function fact with the signature:

    int fact (int n);

Salviati: Now you guys can add a post-condition!

Simplicio: Where will the postcondition go?

Sagredo: It’s between lines ____ and ____.

Simplicio: I have no idea what it could possibly be, though!

Sagredo: //@ensures __________________________________________;