1. **"Reverse" Vocabulary!**
   As the material in this course become more and more abstract, the concepts become harder to grasp quickly. Instead of trying to guess the difficult concepts, we want you to **provide us with the terms or concepts** you don't think you understand yet, and **provide your current definition or understanding** of the term or concept to clear any misconceptions or affirm your knowledge. Your answers can be either specific vocabulary terms or more general ideas. We'll try to address some of these concepts and/or terms in this and future exercises.

2. What did you struggle with the most on Exam 1? Your TA will spend a few minutes going over the most misunderstood concepts.

3. Were there times in Assignment 3 you would have liked to modify an argument inside a function? Or return multiple values from a function?
   If you can't think of examples from Assignment 3, what about a function called get_user_input() that needs to get 3 pieces of information from the user?

4. What are pre-conditions and post-conditions?
   Pre-conditions and post-conditions become (slightly!) more important when the function in question has **reference parameters**. For each of the three following functions, **write down a brief description of their purpose, as well as their pre-conditions and post-conditions**.

   ```
   double calc_average(double sum, int count) {
       return sum/count;
   }


   void swap_chars(string &str) {
       char first = str.at(0);
       str.at(0) = str.at(1);
       str.at(1) =  first;
   }
   ```

```
void update_average(double &average, int &count, double new_val)
{
    double sum = average*count;
    sum += new_val;
    count += 1;
    average = sum/count;
}
```

5. With what you now know, how would you make the following code work?

```
void add_one(int a){
    a++;
}

int main() {
    int a = 5;
    add_one(a);
    cout << 5 << " plus 1 = " << a << endl;

    return 0;
}
```

Optional topics if you have time…
6. What is a default argument and where does it need to be?

7. Can you ever have multiple functions with the same name in C++? Explain.