

This worksheet is for your use during and after lecture. It will not be collected or graded, but I think you will find it a useful tool as you learn C++ and study for the exams. Explain all false answers for the “True or False” questions; in general, show enough work and provide enough explanation so that this sheet is a useful pre-exam review. I will be happy to review your answers with you during office-hours, via Email, or instant messaging.

1. C++, like many programming languages, has *repetition statements* or *looping structures*. Explain precisely what is being repeated when these are used.
2. Which repetition structure is most likely to have a “loop counter”?
3. How many question marks will be printed to the console?

```
1 for( int i(0); i<5; i++ ) {  
2     for( int j(i); j>=1; j-- ) {  
3         cout << '?' ;  
4     }  
5 }  
6 cout << endl;
```

4. Using an if statement and the break keyword, add code to the following program so that it terminates instead of attempting the `sqrt()` of a negative number.

```
1 #include <iostream>  
2 #include <cmath>  
3 using namespace std;  
4  
5 int main()  
6 {  
7     // Variable to be read from user  
8     double x(0);  
9     while( true ) {  
10  
11         cout << "Enter_a_number_for_sqrt:" <<  
12             endl;  
13         cin >> x;  
14  
15         cout << "The_sqrt_of_" << x << "is_" <<  
16             sqrt(x) << endl;  
17     }  
18  
19     return 0;  
20 }  
21
```

