# CSCI 1370

Instructor: Emmett Tomai

The point of these exercises is to allow you to evaluate whether you have learned the material from the past week, and to direct you in additional studying outside of class. These are exactly the types of questions that will show up on your tests.

My advice is to figure it out on paper, using your book or other resources, and then verify your answer by running the code. If you really want to learn the material, try variations and make sure you understand why the behavior changes the way it does.

## Review exercises: functions with reference parameters

1. Write the function definition for a function that swaps the values of two string variables. That is, if word1 contains "First" and word2 contains "Second", then after calling your function with those variables, word1 should contain "Second" and word2 should contain "First".

```
Answer:
void swap_strings( string& word1, string& word2 )
{
   string temp = word1;
   word1 = word2;
   word2 = temp;
}
```

2. Write a C++ statement to call the function you wrote to swap the two strings below:

```
string word1 = "Arugala";
string word2 = "Bazingzing";

// function call to swap word1 and word2 goes here
Answer:
swap_strings( word1, word2 );
```

3. What is the output to the screen of the following code?

```
void test( int first, int& second )
{
	int third;
	third = first + second + 2;
	second = 2 * second;

	cout << first << " " << second << " " << third << endl;
}

int main()
{
	int num = 5;

	test( 24, num );
	cout << num << endl;

	test( num, num );
	cout << num << endl;

	test( num + num, num );
	cout << num << endl;

	return 0;
}
```

```
24 10 31
10
10 20 22
20
40 40 62
40
```

4. Not sure you've got the material down? Try more problems! They're in books, they're online, they're not hard to find. You should be able to come up with variations on question 3 on your own, just move things around, try different calls, and put it in Visual Studio to check your answers.