|  |  |  |
| --- | --- | --- |
|  | LAB #3  Functions |  |

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

This lab exercise is closed book/closed notes and an individual effort. It is to be completed in person on this sheet. This lab is worth 50 points and you will have 75 minutes to complete it. Fill in the following blanks with the missing code (pay close attention to syntax!)

1. Explain the difference between passing by value and passing by reference. Be sure to discuss how changes in the function affect the variable passed into it. (5 points)

|  |
| --- |
|  |

2. Complete the two functions on the reverse page. Review the main function first. Pay careful attention to the main code to help understand what each function does. (45 points)

|  |
| --- |
| #include <iostream> // For console IO  using namespace std; // using the standard namespace (std::)  // Define a function to greet the user. It won't return anything  // Define a function that multiplies the first two arguments and stores the result in the third // argument which should be saved in the variable passed in by the calling code (c in this code).  // Consider whether we want to pass by value or by reference. Only pass by reference if needed.  // Return a 0 if the final value of c is less than 1000 otherwise return a -1  int multiply( ) {  }  int main() {  greet();  int a, b, c, valid;  cout << "Enter a: ";  cin >> a;  cout << "Enter b: ";  cin >> b;  valid = multiply(a, b, c);  if (valid == 0) {  cout << "a \* b = " << c << endl;  } else {  cout << "Result is too large!" << endl;  }  } |