If there are no errors in the program, show what will be printed by

each of the following programs. If there are any errors in the program

explain what is wrong.

1. #include <iostream> 2. #include <iostream>

using namespace std; using namespace std;

int three(int,int); int three(int,int);

int main() int main()

{ {

int a,b; int f;

a = 3; f = 1;

b = 4; for (int i = 1 ; i < 5 ; i++)

cout << three(a,b); {

} f = three(i,f);

int three(int x, int y) cout << f << endl;

{ }

int a; }

a = x + y; int three(int a, int b)

return a; {

} int z;

z = a + a \* b;

return z;

}

**Program #1 display “7” and Program #2 will display:**

**2**

**6**

**21**

**88**

3. Write a function that returns the cost of mailing a package, given

the weight of the package in pounds and ounces, and a cost per ounce.

Recall that there are 16 ounces in a pound. ("given" means that these values will be passed to the function as parameters, so you will need to have three parameters)

**double package\_cost(int pounds, int ounces, double oz\_cost)**

**{**

**int total\_ounces = pounds \* 16 + ounces;**

**double total\_cost = total\_ounces \* oz\_cost;**

**return total\_cost;**

**}**

4. Write a prototype for your function in the previous question.

**double package\_cost(int, int, double);**

5. Write the statements to read in the weight of a package (in pounds and ounces), and the cost per ounce for mailing. Then call your function to calculate the mailing cost, and print the mailing cost.

**int pounds, ounces;**

**double oz\_cost;**

**cout << “Enter the weight in pounds and ounces ([pounds] [ounces]): ”**

**cin >> pounds >> ounces;**

**cout << “Enter the cost per ounce for mailing: “;**

**cin >> oz\_cost;**

**cout << setprecision(2) << fixed << “The total cost is $” << package\_cost(pounds, ounces, oz\_cost);**

6. Write a function checkeven which receives 3 integer variables and

prints YES if all three numbers are even. Otherwise the function

prints NO. ("receives" means that these values will be passed to the

function as parameters). Note that this function will not return anything.

**void checkeven(int num1, int num2, int num3)**

**{**

**if (num1 % 2 == 0 && num2 % 2 == 0 && num3 % 2 == 0)**

**cout << “YES”;**

**else**

**cout << “NO”;**

**}**

7. Write a prototype for the checkeven function.

**void checkeven(int, int, int);**

8. Write the statements to read in three numbers and call the

checkeven function.

**int num1, num2, num3;**

**cout << “Enter three integers separated by spaces: “;**

**cin >> num1 >> num2 >> num3;**

**cout << “Are all three even? “;**

**checkeven(num1, num2, num3);**

9. Write another version of the checkeven function. This version

receives 3 integer variables and returns true if all three numbers

are even. Otherwise, the function returns false. Note: This function does return something. What datatype do we need in order to return true or false?

**bool checkeven(int num1, int num2, int num3)**

**{**

**return !(num1 % 2 || num2 % 2 || num3 % 2);**

**}**

10. Write a prototype for the new version of the checkeven function.

**bool checkeven(int, int, int);**

11. Write the statements to read in three numbers and call the

checkeven function. Then print YES if all three numbers were even, or

print NO if they were not all even.

**int num1, num2, num3;**

**cout << "Enter three integers separated by spaces : ";**

**cin >> num1 >> num2 >> num3;**

**cout << "Are all three even? ";**

**if (checkeven(num1, num2, num3)) {**

**cout << "YES";**

**} else {**

**cout << "NO";**

**}**

**cout << endl;**