**C++**

**Qualification Test #1**

1. Write a program that asks the user to enter two integers, obtain the numbers from the user, then print the larger number followed by the words "is larger.", if the numbers are equal, print the message "these numbers are equal."

**# include <iostream>**

**using namespace std;**

**int main ( )**

**{**

int x , y;

cout << **"**Enter two integers: **"**;

cin >> x >> y;

if ( x > y )

cout << x << **"** is larger.**"**<< endl;

if ( y > x )

cout << y << **"** is larger.**"**<< endl;

if ( x == y )

cout << **"**These numbers are equal.**"** << endl;

**return 0;**

**}**

1. Write a program that reads three integers and prints their total, product and average.

**# include <iostream>**

**using namespace std;**

**int main ( )**

**{**

int x, y, z;

**(1)** int total, prod;

double avg;

cout << **"**Enter three integers: **"**;

**(2)**

cin >> x >> y >> z;

total = x + y + z;

**(3)** prod = x \* y \* z;

avg = total / 3.0;

cout << **"**Total = **"** << total << endl;

**(4)** cout << **"**Product = **"** << prod << endl;

cout << **"**Average = **"** << avg << endl;

**return 0;**

**}**

1. Write a single C++ statement or line that accomplishes each of the following:
   1. Print the message "Enter two numbers".
   2. Assign the product of variables b and c to variable a.
   3. State that a program performs a sample payroll calculation (use text that helps to document a program).
   4. Input three integer values from the keyboard into integer variables a, b and c.

a) cout << "Enter two numbers";

b) a = b \* c;

c) // A sample payroll calculation.

d) cin >> a >> b >> c;

1. What, if anything, prints when each of the following C++ statements is performed? If nothing prints, then answer "nothing". Assume x = 10 and y = 1.
2. **cout << x;**
3. **cout << x + x;**
4. **cout << "x = ";**
5. **cout << "x = " << x;**
6. **cout << x + y << " = " << y + x;**
7. **z = x + y;**
8. **cin >> x >> y;**
9. **// cout << "x + y = " << x + y;**
10. **cout << "\n";**

**a) cout << x;** 2 2

**b) cout << x + x;** 4 4

**c) cout << "x = ";** x = x =

**d) cout << "x = " << x;** x = 2 x = 2

**e) cout << x + y << " = " << y + x;** 5 = 5 5 = 5

**f) z = x + y;** nothing nothing

**g) cin >> x >> y;** nothing nothing

**h) // cout << "x + y = " << x + y;** nothing nothing

**i) cout << "\n";** a new line a new line

1. Write a program that inputs three integers from the keyboard and prints the sum, average, product, smallest and largest of these numbers, The screen dialogue should appear as follows:

Input three different integers :

N1 > 13

N2 > 27

N3 > 14

Sum is : 54

Average is : 18

Product is : 4914

Smallest is : 13

Largest is : 27

**# include <iostream>**

**using namespace std;**

**int main ( )**

**{**

int x, y, z, smallest, largest;

cout << "Input three different integers: ";

cin >> x >> y >> z;

cout << "Sum is " << x + y + z << endl;

cout << "Average is " << ( x + y + z ) / 3 << endl;

cout << "Product is " << x \* y \* z << endl;

smallest = x;

if ( y < smallest )

smallest = y;

if ( z < smallest )

smallest = z;

cout << "Smallest is " << smallest << endl;

largest = x;

if ( y > largest )

largest = y;

if ( z > largest )

largest = z;

cout << "Largest is " << largest << endl;

**return 0;**

**}**