



# PROGRAMMING FUNDAMENTAL ASSIGNMENT

## ASSIGNMENT#2

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### **PROGRAM#1**

```
#include <iostream>
using namespace std;
int main(){
    int a = 5, b = 10, c = 15;
    cout << a << endl;
    cout << b << endl;
    cout << c << endl;
    return 0;
}
```

### **PROGRAM#2**

```
#include <iostream>
using namespace std;
int main() {
    cout << "C language is a powerful programming language." << endl;
    return 0;
}
```

### **PROGRAM#3**

```
#include <iostream>
using namespace std;
int main() {
    int x=7 , y=12;
    int temp=x;
    x=y;
    y=temp;
    cout<<"x="<<x<<"y="<<y<<endl;
    return 0;
}
```

#### **PROGRAM#4**

```
#include <iostream>
using namespace std;
int main() {
    int year = 3;
    int months = year * 12;
    cout << "months = " << months << endl;
    return 0;
}
```

#### **PROGRAM#5**

```
#include <iostream>
using namespace std;
int main() {
    double a, b;
    cin >> a >> b;
    cout << "sum = " << (a+b) << "\nproduct = " << (a*b) << endl;
    return 0;
}
```

#### **PROGRAM#6**

```
#include <iostream>
using namespace std;
int main() {
    int years = 6;
    cout << "age in months = "<< years*12 << endl;
    return 0;
}
```

### **PROGRAM#7**

```
#include <iostream>
using namespace std;
int main() {
    int roll;
    double m1, m2, m3;

    cout << "Enter roll number and marks of 3 subjects: ";
    cin >> roll >> m1 >> m2 >> m3;

    double total = m1 + m2 + m3;
    double average = total / 3.0;

    cout << "Roll: " << roll << endl;
    cout << "Total: " << total << endl;
    cout << "Average: " << average << endl;

    return 0;
}
```

### **PROGRAM#8**

```
#include <iostream>
using namespace std;
int main() {
    double f;
    cin >> f;
    double c = (5.0 / 9.0) * (f - 32.0);
    cout << "Celsius = " << c << endl;
    return 0;
}
```

### **PROGRAM#9**

```
#include <iostream>
using namespace std;

int main() {
    double a, b, c, d;
    cout << "Enter four numbers: ";
    cin >> a >> b >> c >> d;

    double maxValue = a; // assume 'a' is the largest number

    if (b > maxValue)
        maxValue = b;

    if (c > maxValue)
        maxValue = c;

    if (d > maxValue)
        maxValue = d;

    cout << "Maximum = " << maxValue << endl;

    return 0;
}
```

### **PROGRAM#10**

```
#include <iostream>
using namespace std;
int main() {
    double miles = 2.5;
    double km = miles * 1.609;
    cout << "kilometers = " << km << endl;
    return 0;
}
```

### **PROGRAM#11**

```
#include <iostream>
using namespace std;
int main() {
    int a = 5, b = 10;
    double avg = (a+b) / 2;
    cout << "average = " << avg << endl;
    return 0;
}
```

### **PROGRAM#12**

```
#include <iostream>
using namespace std;
int main() {
    const double pi = 3.14;
    double r = 2.0, h = 5.0;
    double volume = pi*r*r*h;
    cout << "volume = " << volume << endl;
    return 0;
}
```

### **PROGRAM#13**

```
#include <iostream>
#define pi 3.14
using namespace std;
int main() {
    double r = 3.0;
    double area = pi * r * r;
    cout << " area = " << area << endl;
    return 0;
}
```

### **PROFRAM#14**

```
#include <iostream>
using namespace std;
int main() {
    double mm;
    cin >> mm;
    double inches = mm / 25.4;
    cout << " inches = " << inches << endl;
    return 0;
}
```

### **PROGRAM#15**

```
#include <iostream>
using namespace std;
int main() {
    int a = 8;
    int b = 9;
    int temp = a;
    a = b;
    b = temp;
    cout << " a =" << a << " , b =" << b << endl;
    return 0;
}
```

### **PROGRAM#16**

```
#include <iostream>
using namespace std;
int main() {
    int a, b, c;
    a = b = c = 3;
    int product = a * b * c;
    cout << "product = " << product << endl;
    return 0;
}
```

### **PROGRAM#17**

```
#include <iostream>
using namespace std;
int main() {
    double num = 15.58971;
    int integral = (int)num;
    double fractional = num - integral;
    cout << "integral = " << integral << "\nfractional = " << fractional <<
endl;
    return 0;
}
```

### **PROGRAM#18**

```
#include <iostream>
using namespace std;
int main() {
    double vi = 2.0, a = 3.0, t = 4.0;
    double s = vi*t + 0.5 * a * t * t;
    cout << "s = " << s << endl;
    return 0;
}
```

### **PROGRAM#19**

```
#include <iostream>
using namespace std;
int main() {
    int age = 20;
    int months = age * 12;
    int days = age * 365;
    cout << "months = " << months << " \ndays = " << days << endl;
    return 0;
}
```



### **PROGRAM#20**

```
#include <iostream>
using namespace std;
int main() {
    cout << " C : \\Window> " << endl;
    cout << " p ' \t ' A ' \t ' K " << endl;
    cout << " \"Pakistan\"" << endl;
    return 0;
}
```

### **PROGRAM#21**

```
#include <iostream>
using namespace std;
int main() {
    cout << " XXXXX\nXXXX\nXXX\nXX\nX\n" ;
    return 0;
}
```

### **PROGRAM#22**

```
#include <iostream>
using namespace std;
int main() {
    string name;
    int age;
    double height;
    char gender;

    cin >> name >> age >> height >> gender;
    cout << " name: " << name << " \nage: " << age << " \nheight: " << height
<< "\ngender: " << gender << endl;
    return 0;
}
```

### **PROGRAM#23**

```
#include <iostream>
using namespace std;
int main() {
    const double pi = 3.14;
    double r;
    cin >> r;
    double area = pi * r * r;
    double circumference = 2 * pi * r;
    cout << " area = " << area << " \ncircumference = " << circumference <<
endl;
    return 0;
}
```

### **PROGRAM#24**

```
#include <iostream>
using namespace std;
int main() {
    double m1, m2, m3, m4, m5;
    cin >> m1 >> m2 >> m3 >> m4 >> m5;
    double total = m1+ m2+ m3+ m4+ m5;
    double average = total / 5.0;
    cout << " total = " << total << " \naverage = " << average << endl;
    return 0;
}
```

### **PROGRAM#25**

```
#include <iostream>
#include <cmath>
using namespace std;
int main() {
    double a, b, c;
    cin >> a >> b >> c;
    double s = (a + b + c) / 2.0;
    double area = sqrt(s * (s - a) * (s - b) * (s - c));
    cout << "Area = " << area << endl;
    return 0;
}
```

### **PROGRAM#26**

```
#include <iostream>
using namespace std;
int main() {
    double rupees = 12000;
    double dollars = 12000 / 60.0;
    cout << " dollars = " << dollars << endl;
    return 0;
}
```

### **PROGRAM#27**

```
#include <iostream>
using namespace std;
int main() {
    int h, m, s;
    cin >> h >> m >> s;
    int total = h * 3600 * m * 60 + s;
    cout << " total seconds = " << total << endl;
    return 0;
}
```

### **PROGRAM#28**

```
#include <iostream>
using namespace std;
int main() {
    double a, b, c;
    cin >> a >> b >> c;
    double disc = b * b - 4 * a * c;
    cout << "discrimenet = " << disc << endl;
    return 0;
}
```

### **PROGRAM#29**

```
#include <iostream>
using namespace std;
int main() {
    int n;
    cout << "enter a number: ";
    cin >> n;
    if (n > 100){
        cout << "The value is greater than 100" << endl;
    } else {
        cout << "The value is not greater then 100 " << endl;
    }
    return 0;
}
```

### **PROGRAM#30**

```
#include <iostream>
using namespace std;
int main() {
    int n;
    cin >> n;
    if (n % 2 == 0)
        cout << " even " << endl;
    else
        cout << " odd " << endl;
    return 0;
}
```

**END**