C++ Assignments | Fundamentals of Programming -1 | Week2

Ans1:

```
#include <iostream>
using namespace std;
int main() {
int num1, num2;
cout << "Enter first number:";
cin >> num1;
cout << "Enter second number:";
cin >> num2;
if (num1 > num2) {
cout << "First number " << num1 << " is the largest";
} else {
cout << "Second number " << num2 << " is the largest";
}
return 0;
}
```

Ans2:

```
#include <iostream>
using namespace std;
int main() {
int radius;
cout << "Enter the radius : ";
cin >> radius;
float area = 3.14 * radius * radius;
float circumference = 2 * 3.14 * radius;
if (area > circumference) cout << "Area is greater than circumference." << endl;
else cout << "Circumference is greater than area." << endl;
return 0;
}
```

Ans3;

```
#include <iostream>
using namespace std;
int main() {
int year;
cout << "Enter a year: ";
cin >> year;
if (year % 400 == 0) {
cout << year << " is a leap year.";
}

else if (year % 100 == 0) {
```

```
cout << year << " is not a leap year.";
}
else if (year % 4 == 0) {
cout << year << " is a leap year.";
}
else {
cout << year << " is not a leap year.";
}
return 0;
}
```

Ans:4

```
#include <iostream>

using namespace std;

int main() {

int length, breadth;

cout << "Enter the length and breadth of the rectangle respectively : ";

cin >> length >> breadth;

int area = length * breadth;

int perimeter = 2 * (length + breadth);

if (area > perimeter) cout << "Area is greater than perimeter.";

else cout << "Perimeter is greater than area.";


return 0;
}
```

Ans5:

```
#include<iostream>

using namespace std;

int main() {

int side1, side2, side3;

cout << "Please Enter Three Sides of a Triangle = ";
```

```
cin >> side1 >> side2 >> side3;

if (side1 == side2 && side2 == side3) {

cout << "This is an Equilateral Triangle";
}
else if (side1 == side2 || side2 == side3 || side1 == side3) {

cout << "This is an Isosceles Triangle";
}
 else
cout << "This is a Scalene Triangle";

return 0;
}
```

Ans6:

```
#include <bits/stdc++.h>

using namespace std;

int main() {

cout << "Enter marks of the students : ";

int a, b, c;

cin >> a >> b >> c;

if (a <= b && a <= c)

cout << "A scores the least marks";

else if (b <= a && b <= c)

cout << "B scores the least marks";

else

cout << "C scores the least marks";

return 0;

}
```

Ans7:

```
#include<iostream>
using namespace std;
int main() {
float x, y;
printf("Enter the x-y coordinates of the point : ");
cin >> x >> y;
if (x == 0 && y == 0)
cout << "The point is on the origin.";
if (x == 0 && y != 0)
cout << "The point lie on the y-axis.";
if (x != 0 && y == 0)
cout << "The points lie on the x-axis.";
if (x != 0 && y != 0)
cout << "The points lie on the plane.";
return 0;
}
```

Ans8:

```
#include <iostream>

using namespace std;

int main() {

float x1, y1, x2, y2, x3, y3, slope1, slope2;

cout << "Enter points (x1, y1)" << endl;

cin >> x1 >> y1;
cout << "Enter points (x2, y2)" << endl;

cin >> x2 >> y2;

cout << "Enter points (x3, y3)" << endl;

cin >> x3 >> y3;

slope1 = (y2 - y1) / (x2 - x1);

slope2 = (y3 - y2) / (x3 - x2);

if (slope1 == slope2) {
cout << "All 3 points lie on the same line";
}
 else {
```

```
cout << "All 3 points do not lie on the same line";
}

return 0;
}
```

Ans:9

```
#include<iostream>

using namespace std;

int main() {

char ch;

cout << "Enter any character : ";

cin >> ch;

if ((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z')) {
cout << ch << " is an Alphabet";
}
 else if (ch >= '0' && ch <= '9') {
cout << ch << " is a Digit";
}
 else {
cout << ch << " is a Special Character";
}
return 0;
}
```

Ans10:

value of b and c are respectively 300 and 200