

```
// Write a program to calculate the area of a circle, rectangle,  
// square, triangle upon user's choice while the area of each  
// figure is calculated by an overloaded area function.
```

```
#include <iostream.h>  
#include <math.h>  
#include <conio.h>  
#include <stdlib.h>
```

```
float area(float);      // Circle  
float area(int, float); // Rectangle  
int area(int);          // Square  
float area(float, float); // Triangle
```

```
void main() {  
    clrscr();  
    int y, l;  
    float b, h, r, a;  
    cout << "Find area of:" << endl;  
    cout << "1) Circle" << endl;  
    cout << "2) Rectangle" << endl;  
    cout << "3) Square" << endl;  
    cout << "4) Triangle" << endl;  
    cout << "\nEnter your choice: "; cin >> y;  
  
    switch (y) {  
        case 1:  
            cout << "Enter radius: "; cin >> r;  
            a = area(r); break;  
        case 2:  
            cout << "Enter length: "; cin >> l;  
            cout << "Enter breadth: "; cin >> b;  
            a = area(l, b); break;  
        case 3:  
            cout << "Enter length: "; cin >> l;  
            a = area(l); break;  
        case 4:  
            cout << "Enter base: "; cin >> b;  
            cout << "Enter height: "; cin >> h;  
            a = area(b, h); break;  
        default:  
            cout << "\nCheck your choice.";   
            getch(); exit(0);  
    }  
    cout << "\nArea calculated : " << a << endl;  
    getch();  
}
```

```
// Circle  
float area(float rad) {  
    return M_PI * rad * rad;  
}
```

```
// Rectangle  
float area(int length, float breadth) {  
    return length * breadth;  
}
```

```
// Square  
int area(int length) {  
    return length * length;  
}
```

```
// Triangle  
float area(float base, float height) {  
    return 0.5 * base * height;  
}
```