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

class BasicShape
{
private:
    double area;

public:
    double getArea()
    {
        return area;
    }
    void setArea(double a)
    {
        area = a;
    }
    virtual double calcArea() = 0;
};

class Circle : public BasicShape
{
private:
    long centerX;
    long centerY;
    double radius;
public:
    Circle(long x, long y, double rad)
    {
        centerX = x;
        centerY = y;
        radius = rad;
        calcArea();
    }
    long getCenterX()
    {
        return centerX;
    }
    long getCenterY()
    {
        return centerY;
    }
    double calcArea()
    {
        double a = 3.14159 * radius * radius;
        BasicShape::setArea(a);
        return a;
    }
    double getArea()
```

```
50      {
51          return BasicShape::getArea();
52      }
53  };
54
55  class Rectangle : public BasicShape
56  {
57  private:
58      long width;
59      long length;
60
61  public:
62      Rectangle(long w, long l)
63      {
64          width = w;
65          length = l;
66          calcArea();
67      }
68
69      long getWidth()
70          { return width; }
71
72      long getLength()
73          { return length; }
74
75      double calcArea()
76      {
77          double a = length * width;
78          BasicShape::setArea(a);
79          return a;
80      }
81  };
82
83  int main()
84  {
85      BasicShape* shapes[3] = { new Circle(0,0,5),
86                                new Rectangle(6, 4),
87                                new Circle(1,1,6)
88      };
89
90      for (int index = 0; index < 3; index++)
91      {
92          cout << shapes[index]->calcArea() << endl;
93          cout << "---------------------------\n";
94      }
95
96      return 0;
97  }
98
```