

Название: Программа для вычисления площади нескольких фигур.

Текст программы:

```
using System;
using System.Collections.Generic;
namespace GEOMSH
{

    abstract class GS
    {
        public abstract double Area();

        public override string ToString()
        {
            return $"Area: {Area()}";
        }

        public virtual void Print()
        {
            Console.WriteLine(ToString());
        }
    }
}
```

```
class Rectangle : GS
{
    private double w;
    private double h;

    public double Width
    {
        get { return w; }
        set { w = value; }
    }

    public double Height
    {
        get { return h; }
        set { h = value; }
    }

    public Rectangle(double wid, double hei)
    {
        Width = wid;
        Height = hei;
    }
}
```

```
public override double Area()
{
    return Width * Height;
}
```

```
public override string ToString()
{
    return $"Derzhi resultat: V shirinu = {Width}, V visotu = {Height},
{base.ToString()}";
}
}
```

```
class Square : Rectangle
{
    public Square(double side) : base(side, side)
    {
    }
}
```

```
public override string ToString()
{
    return $"Квадрат: Storona = {Width}, {base.ToString()}";
}
}
```

```
class Circle : GS
{
    private double _radius;
```

```
public double Radius
{
    get { return _radius; }
    set { _radius = value; }
}
```

```
public Circle(double radius)
{
    Radius = radius;
}
```

```
public override double Area()
{
    return Math.PI * Math.Pow(Radius, 2);
}
```

```
public override string ToString()
{
    return $"Kruzhok: radius = {Radius}, {base.ToString()}";
}
}
```

```
class Program
{
```

```
static void Main(string[] args)
{
    Console.WriteLine("Viberi boitsa:");
    Console.WriteLine("1. Pryamougolnik");
    Console.WriteLine("2. Quadratik");
    Console.WriteLine("3. Kruzhocek");

    int choice = int.Parse(Console.ReadLine());

    GS shape = null;

    switch (choice)
    {
        case 1:
            Console.WriteLine("vvodi shirinu:");
            double width = double.Parse(Console.ReadLine());
            Console.WriteLine("vvodi visotu ");
            double height = double.Parse(Console.ReadLine());
            shape = new Rectangle(width, height);
            break;
        case 2:
            Console.WriteLine("bahni storonu:");
            double side = double.Parse(Console.ReadLine());
            shape = new Square(side);
            break;
        case 3:
```

```

        Console.WriteLine("radius please:");
        double radius = double.Parse(Console.ReadLine());
        shape = new Circle(radius);
        break;
    default:
        Console.WriteLine("Ya ne budu schitat. Vvedi normalno");
        break;
    }

    if (shape != null)
    {
        shape.Print();
    }

    Console.ReadKey();
}
}
}

```

Результаты работы программы:

Viberi boitsa:

1. Pryamougolnik
2. Quadratik
3. Kruzhocek

3

radius please:

5

Kruzhok: radius = 5, Area: 78.5398163397448

Viberi boitsa:

1. Pryamougolnik

2. Quadratik

3. Kruzhocek

1

vvodi shirinu:

5

vvodi visotu

4

Derzhi resultat: V shirinu = 5, V visotu = 4, Area: 20

Viberi boitsa:

1. Pryamougolnik

2. Quadratik

3. Kruzhocek

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Ya ne budu schitat. Vvedi normalno