

Группа: ИУ5-31Б

Студент: Керимова Жанна

Лабораторная работа №3

Название: Программа для вычисления площади 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 $"Kruzhek: 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