

# Class Geometry

java.lang.Object  
Geometry

```
public class Geometry
extends Object
```

This program demonstrates static methods

## Constructor Summary

Constructors	
Constructor	Description
Geometry()	

## Method Summary

All Methods	Static Methods	Concrete Methods	
Modifier and Type	Method		Description
static double	circleArea(double radius)		Calculates the area of a circle.
static double	circleCircumference(double radius)		Calculates the circumference of a circle.
static void	main(String [] args)		
static void	printMenu()		
static double	rectangleArea(double length, double width)		Calculates the area of a rectangle.
static double	rectanglePerimeter(double length, double width)		Calculates the perimeter of a rectangle.
static double	triangleArea(double height, double base)		Calculates the area of a triangle.
static double	trianglePerimeter(double side1, double side2, double side3)		Calculates the perimeter of a triangle.

### Methods inherited from class java.lang.Object

equals , getClass , hashCode , notify , notifyAll , toString , wait , wait , wait

## Constructor Details

### Geometry

```
public Geometry()
```

## Method Details

### main

```
public static void main(String [] args)
```

### printMenu

```
public static void printMenu()
```

### circleArea

```
public static double circleArea(double radius)
```

Calculates the area of a circle. This method takes the radius of the circle and calculates the area using the formula:  $\text{area} = \pi * \text{radius}^2$ .

**Parameters:**

radius - The radius of the circle.

**Returns:**

The area of the circle.

### rectangleArea

```
public static double rectangleArea(double length,  
                                   double width)
```

Calculates the area of a rectangle. This method requires the length and width of the rectangle and calculates the area using the formula:  $\text{area} = \text{length} * \text{width}$ .

**Parameters:**

length - The length of the rectangle.

width - The width of the rectangle.

**Returns:**

The area of the rectangle.

### triangleArea

```
public static double triangleArea(double height,  
                                double base)
```

Calculates the area of a triangle. This method requires the height and base of the triangle and calculates the area using the formula:  $\text{area} = (1/2) * \text{base} * \text{height}$ .

**Parameters:**

height - The height of the triangle.

base - The base of the triangle.

**Returns:**

The area of the triangle.

### circleCircumference

```
public static double circleCircumference(double radius)
```

Calculates the circumference of a circle. This method takes the radius of the circle and calculates the circumference using the formula:  $\text{circumference} = 2 * \pi * \text{radius}$ .

**Parameters:**

radius - The radius of the circle.

**Returns:**

The circumference of the circle.

### rectanglePerimeter

```
public static double rectanglePerimeter(double length,  
                                double width)
```

Calculates the perimeter of a rectangle. This method requires the length and width of the rectangle and calculates the perimeter using the formula:  $\text{perimeter} = 2 * (\text{length} + \text{width})$ .

**Parameters:**

length - The length of the rectangle.

width - The width of the rectangle.

**Returns:**

The perimeter of the rectangle.

**trianglePerimeter**

```
public static double trianglePerimeter(double side1,  
                                       double side2,  
                                       double side3)
```

Calculates the perimeter of a triangle. This method requires the lengths of all three sides of the triangle and calculates the perimeter by summing the lengths of the sides.

**Parameters:**

`side1` - The length of the first side of the triangle.

`side2` - The length of the second side of the triangle.

`side3` - The length of the third side of the triangle.

**Returns:**

The perimeter of the triangle.