

```
interface Figure {  
  
    // Método sobrescrito  
    fun calcArea(): Double {  
        var area: Double = 0.0;  
        return area;  
    }  
}
```

```
class Square(val side: Double, name: String = "Quadrado") : Figure {  
  
    // Metodo exclusivo  
    fun calcPerimeter(): Double = side * 4  
  
    override fun calcArea(): Double {  
        var area: Double = side * side;  
        return area;  
    }  
}
```

```
open class Triangle(  
    val sideA: Double,  
    val sideB: Double,  
    val sideC: Double,  
    val base: Double,  
    val height: Double,  
    name: String = "Triângulo"  
) : Figure {  
  
    //Metodo exclusivo  
    fun typeTriangle(): String {  
        when {  
            //ajustar equilatero  
            sideA == sideB && sideB == sideC -> return "Equilatero"  
            sideA == sideB || sideB == sideC || sideC == sideA ->  
return "Isosceles"  
            else -> return "Escaleno"  
        }  
    }  
  
    override fun calcArea(): Double {  
        var area: Double = (base * height) / 2  
        return area;  
    }  
}
```

```
open class Circle (var lightning: Double, name: String =  
"circumference") : Figure {  
  
    // Método exclusivo  
    fun calcCircle() = 2 * Math.PI * lightning;  
  
    override fun calcArea(): Double {  
        return Math.PI * (lightning * lightning)  
    }  
}
```

```

fun main(args: Array<String>) {
    val figure: Figure
    println("Digite 1 para área do quadrado, 2 para o tipo de
    triângulo, 3 para área da circunferencia.")

    var question = readLine()?.toInt();

    if (question === 1) {
        // Quadrado
        println("Insira o valor do lado do quadrado: ")

        var side: Double = readLine()?.toDoubleOrNull() ?: 5.0
        figure = Square(side)

        println("A area do quadrado é: ${figure.calcArea()}")
    } else if (question === 2) {
        //Triângulo
        println("Insira os lados do triângulo: ")

        var side1: Double = readLine()?.toDoubleOrNull() ?: 5.0
        var side2: Double = readLine()?.toDoubleOrNull() ?: 5.0
        var side3: Double = readLine()?.toDoubleOrNull() ?: 5.0
        var base: Double = 5.0
        var height: Double = 5.0
        figure = Triangle(side1,side2,side3,base,height)

        if (figure is Triangle)
            println("O tipo de triângulo é: ${figure.typeTriangle()}")
    } else if (question === 3) {
        // Circulo
        println("Insira o raio da circunferencia: ")

        var lightning: Double = readLine()?.toDoubleOrNull() ?: 5.0
        figure = Circle(lightning);
        if (figure is Circle)
            println("A área da circunferencia é:
    ${figure.calcArea()}")
    }
}

```

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