import java.util.\*;

public class App {

static Scanner scanner = new Scanner(System.in);

static Scanner scannerBool = new Scanner(System.in);

static Scanner scannerStr = new Scanner(System.in);

public static void main(String[] args) throws Exception {

System.out.print("Enter side 1: ");

double sideA = scanner.nextDouble();

System.out.print("Enter side 2: ");

double sideB = scanner.nextDouble();

System.out.print("Enter side 3: ");

double sideC = scanner.nextDouble();

System.out.print("Enter color: ");

String color = scannerStr.nextLine();

System.out.print("Enter filled: ");

boolean filled = scanner.nextBoolean();

System.out.println();

GeometricObject triangle = new Triangle(sideA,sideB,sideC,color,filled);

System.out.println(triangle);

}

}

import java.util.Date;

abstract class GeometricObject{

private String color;

private boolean filled;

private Date dateCreated;

protected GeometricObject(){

this.color = "Black";

this.filled = false;

this.dateCreated = new Date();

}

protected GeometricObject(String color,boolean filled){

this.color = color;

this.filled = filled;

this.dateCreated = new Date();

}

//setter

public void setColor(String color){

this.color = color;

}

public void setFilled(){

this.filled = filled;

}

//getter

public String getColor(){

return color;

}

public boolean isFilled(){

return filled;

}

public Date getDate(){

return dateCreated;

}

//abstract method

abstract public double getArea();

abstract public double getPerimeter();

@Override

public String toString(){

return "Date Created: "+dateCreated+"\nColor: "+color+"\nFilled: "+filled;

}

}

class Triangle extends GeometricObject{

private double sideA,sideB,sideC;

private double perimeter,area;

public Triangle(){

this.sideA = 1;

this.sideB = 1;

this.sideC = 1;

}

public Triangle(double sideA,double sideB,double sideC,String color,boolean filled){

super(color,filled);

this.sideA = sideA;

this.sideB = sideB;

this.sideC = sideC;

}

@Override

public double getArea(){

double s = (sideA + sideB + sideC) / 2;

return Math.sqrt(s \* (s - sideA) \* (s - sideB) \* (s - sideC));

}

@Override

public double getPerimeter(){

return sideA + sideB + sideC;

}

public String toString(){

return super.toString() + "Triangle: side1 = " + sideA +

" side2 = " + sideB + " side3 = " + sideC + "\nPerimeter: " + String.format("%.2f",getPerimeter())+

"\nArea: "+String.format("%.2f",getArea());

}

}