

```

1  import java.util.Scanner;
2
3  public class triangle {
4      // this program calculates the 3 medians in a triangle and its area
5      public static void main(String[] args) {
6          Scanner input = new Scanner(System.in);
7
8          int a, b, c;
9          System.out.print("enter a ->: ");
10         a = input.nextInt();
11         System.out.print("enter b ->: ");
12         b = input.nextInt();
13         System.out.print("enter c ->: ");
14         c = input.nextInt();
15
16         // all length of the triangles squared
17         double pa = Math.pow(a,2);
18         double pb = Math.pow(b,2);
19         double pc = Math.pow(c,2);
20
21         // calculates the median
22         double ma = Math.sqrt((2*pb+2*pc-pa)/4);
23         double mb = Math.sqrt((2*pa+2*pc-pb)/4);
24         double mc = Math.sqrt((2*pb+2*pc-pc)/4);
25
26         System.out.println("the median to A is: "+ ma);
27         System.out.println("the median to B is: "+ mb);
28         System.out.println("the median to C is: "+ mc);
29
30         double p = (a+b+c)/2; // half of the circumference of the triangle
31         double area = Math.sqrt(p*(p-a)*(p-b)*(p-c)); // the area of the triangle
32         System.out.println("the area of the triangle is: " + area);
33     }
34 }
35 /*
36 enter a ->: 3
37 enter b ->: 4
38 enter c ->: 5
39 the median to A is: 4.272001872658765
40 the median to B is: 3.605551275463989
41 the median to C is: 3.774917217635375
42 the area of the triangle is: 6.0
43
44 enter a ->: 8
45 enter b ->: 10
46 enter c ->: 14
47 the median to A is: 11.489125293076057
48 the median to B is: 10.246950765959598
49 the median to C is: 9.9498743710662

```

File - C:\Users\User1\Desktop\School\java\Project1\src\triangle.java

50 *the area of the triangle is: 39.191835884530846*

51 ** */*