

Lecture 20

Java – Triangle Area [Example]

Mostafa Elhosseini

Professor at College of Computer Science and
Engineering

Taibah University

<https://youtube.com/drmelhosseini>

| Triangle Area

- The area of a triangle with 3 sides of different measures can be found using Heron's formula

$$A = \sqrt{s(s - a)(s - b)(s - c)}$$

- where, **s is semi-perimeter of the triangle** $s = (a + b + c) / 2$

| Triangle Area

- Java has no exponentiation operator, but uses the method `java.lang.Math.pow(double a, double b)`

| Triangle Area

```
import java.util.Scanner;
public class sekoseko {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Length 1: ");
        double a = sc.nextDouble();
        System.out.print("Length 2: ");
        double b = sc.nextDouble();
        System.out.print("Length 3: ");
        double c = sc.nextDouble();
        double s = (a+b+c)/2;
        double ar = Math.pow(s*(s-a)*(s-b)*(s-c),0.5);
        System.out.printf("Area = %f",ar);
    }
}
```

| Triangle Area

- The area of a triangle with 3 sides of different measures can be found using Heron's formula

$$A = \sqrt{s(s-a)(s-b)(s-c)}$$

- where, **s is semi-perimeter of the triangle** $s = (a + b + c) / 2$

```
import java.util.Scanner;
public class sekoseko {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Length 1: ");
        double a = sc.nextDouble();
        System.out.print("Length 2: ");
        double b = sc.nextDouble();
        System.out.print("Length 3: ");
        double c = sc.nextDouble();
        double s = (a+b+c)/2;
        double ar = Math.pow(s*(s-a)*(s-b)*(s-c),0.5);
        System.out.printf("Area = %f",ar);
    }
}
```

| References

- Java: How to Program, 9th Edition (Deitel) 9th Edition by Paul Deitel , Harvey M. Deitel
- Head First Java, 2nd Edition 2nd Edition by Kathy Sierra, Bert Bates
- Think Java: How to Think Like a Computer Scientist 1st Edition by Allen B. Downey, Chris Mayfield