

Lab Goal : This lab was designed to teach you more about objects, input, output formatting, and the Math class.

Lab Description : Determine the distance the between two points.

The distance formula for (x1, y1) and (x2, y2) is:

$$\sqrt{(x2 - x1)^2 + (y2 - y1)^2}$$

Sample Data :

```
1 1 2 1
1 1 -2 2
1 1 0 0
```

Sample Output :

```
Enter X1 :: 1
Enter Y1 :: 1
Enter X2 :: 2
Enter Y2 :: 1
distance == 1.000
```

```
Enter X1 :: 1
Enter Y1 :: 1
Enter X2 :: -2
Enter Y2 :: 2
distance == 3.162
```

```
Enter X1 :: 1
Enter Y1 :: 1
Enter X2 :: 0
Enter Y2 :: 0
distance == 1.414
```

Files Needed ::

```
Distance.java
DistanceRunner.java
```

FORMATTING OUTPUT

```
//printf is a void method
System.out.printf("%.3f\n", 9.541724);           //outs 9.542

//format is a String return method
System.out.println(String.format("%.3f", 9.541724)); //outs 9.542
```