**Case1:-**

import java.util.\*;

public class LineComparison1 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the Co-ordinates of x1 and y1 : ");

int x1 = sc.nextInt();

int y1 = sc.nextInt();

System.out.println("Enter the Co-ordinates of x2 and y2 : ");

int x2 = sc.nextInt();

int y2 = sc.nextInt();

double len = Math.sqrt((x2 - x1) \* (x2 - x1) + (y2 - y1) \* (y2 - y1));

System.out.println("Length of the given Line is : " + len + " units" );

}

}

**Case2:-**

import java.util.\*;

public class LineComparison2 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the Co-ordinates of x1 and y1 : ");

int x1 = sc.nextInt();

int y1 = sc.nextInt();

System.out.println("Enter the Co-ordinates of x2 and y2 : ");

int x2 = sc.nextInt();

int y2 = sc.nextInt();

Double len1 = Math.sqrt((x2 - x1) \* (x2 - x1) + (y2 - y1) \* (y2 - y1));

System.out.println("Enter the Co-ordinates of x3 and y3 : ");

int x3 = sc.nextInt();

int y3 = sc.nextInt();

System.out.println("Enter the Co-ordinates of x4 and y4 : ");

int x4 = sc.nextInt();

int y4 = sc.nextInt();

Double len2 = Math.sqrt((x4 - x3) \* (x4 - x3) + (y4 - y3) \* (y4 - y3));

System.out.println("Length of the first Line is : " + len1 + " units" );

System.out.println("Length of the second Line is : " + len2 + " units" );

System.out.println();

if(len1.equals(len2))

System.out.println("Both Lines are EQUAL ");

else

System.out.println("NOT EQUAL lines");

}

}

**Case3:-**

import java.util.\*;

public class LineComparison3 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the Co-ordinates of FIRST line1 ");

System.out.println("Enter the Co-ordinates of x1 and y1 : ");

int x1 = sc.nextInt();

int y1 = sc.nextInt();

System.out.println("Enter the Co-ordinates of x2 and y2 : ");

int x2 = sc.nextInt();

int y2 = sc.nextInt();

Double len1 = Math.sqrt((x2 - x1) \* (x2 - x1) + (y2 - y1) \* (y2 - y1));

System.out.println();

System.out.println("Enter the Co-ordinates of SECOND line2 ");

System.out.println("Enter the Co-ordinates of x3 and y3 : ");

int x3 = sc.nextInt();

int y3 = sc.nextInt();

System.out.println("Enter the Co-ordinates of x4 and y4 : ");

int x4 = sc.nextInt();

int y4 = sc.nextInt();

Double len2 = Math.sqrt((x4 - x3) \* (x4 - x3) + (y4 - y3) \* (y4 - y3));

System.out.println("Length of the first Line1 is : " + len1 + " units" );

System.out.println("Length of the second Line2 is : " + len2 + " units" );

System.out.println();

if(len1.compareTo(len2) == 1)

System.out.println("Length of Line 1 is GREATER than Line 2 ");

else if (len1.compareTo(len2) == -1)

System.out.println("Length of Line 1 is LESS than Line 2 ");

else

System.out.println("Both lines are EQUAL in length");

}

}