Line 1: import the scanner class. This class is responsible for get the input from system stdin, files.etc.

Line 2: **differentdistances** declared as public. Public is access modifier.

Line 3: Inside the class declaration main method is declared and implemented. This method is declared as static and public. And also, the return type is void since main function will not return anything. Static keyword is used when we want to call method without creating an instance of that given class. Since main method is not a member function of any class it is declared as static and also it should be public.

Line 4: Inside the main function the object of the Scanner class is created using it’s constructor. As the argument System.in is given since we are giving input as stdin. The name of the object is given as scan.

Line 6: Create a while loop to run always (condition given as true)

Line8: Using the object that created from the line 4 (scan object) it will scan until a double value is found in the Stdin by using nextDouble() method of the scan object. When there is a value found that value is assigned to double variable called x1.

Line 10-11: In here it is checking that value assigned to x1 is zero. If it is zero then the while loop is terminate. if not below code lines are executed.

Line13-16: Using scan object it will keep scanning double values. When the double value is found that value is assigned to the relevant varables(y1,x2,y2,p) as in the line 8.

Line 18: Next it will print the calculated value using printf function with 5 decimal places. In the printf function “%.5f” indicates a place holder to a float/double value. The value to placeholder is given as next argument in the printf function. Whatever double value given into this it will print it as 5 decimal place value. The value that holds place is calculated as below.

Initially it will take the absolute value of the difference between two coordinates. (x1-x2). Then take the p to the power of that value. Also same thing applied to the (y1-y2). Let say that values are X and Y. Then X + Y is calculated and take the 1/p to the power of that value.

This calculation and printing happen until it found x1 == 0.

Then scan is close and end the programme