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1  /**
2   * The Jones Trucking Company tracks the location of each of its trucks o
n a grid similar to an (x, y) plane. The home office is at location (0, 0
). Read the coordinates of truck A and the coordinates of truck B and de
termine which is closer to the office. Each collection contains 4 integer
s: the x-coordinate and then the y-coordinate of truck A followed by the
x-coordinate and then the y-coordinate of truck B.
3   * This lab was designed to teach you how to use if statements
4   * @author Aryan Gupta
5   * @version 1.0, 10/14/2015
6   */
7  import static java.lang.System.*;
8  import java.util.Scanner;
9  import static java.lang.Math.*;
10
11 public class Distance
12 {
13     // 4 integer instance variables for x and y coordinates
14     private int x1Var, x2Var, y1Var, y2Var;
15
16     public Distance ()
17     {
18         x1Var = 0;
19         y2Var = 0;
20         x2Var = 0;
21         y1Var = 0;
22     } // default constructor
23
24     public Distance (int x1, int y1, int x2, int y2)
25     {
26         setCoordinates(x1, y2, x2, y2);
27     } // loaded constructor
28
29     //Sets the variables set in main() function to variables declared in t
his class
30     public void setCoordinates(int x1, int y1, int x2, int y2)
31     {
32         x1Var = x1;
33         y2Var = y2;
34         x2Var = x2;
35         y1Var = y1;
36     } // method setCoordinates
37
38     //Determines which truck is closer and returns a string declaration
39     public String determineClosest()
40     {
41         double truckOneDis = sqrt( pow( (x1Var - 0) , 2) + pow( (y1Var -
0) , 2) );
42         double truckTwoDis = sqrt( pow( (x2Var - 0) , 2) + pow( (y2Var -
```

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42 0) , 2) );
43
44     if (truckOneDis > truckTwoDis)
45         return ("Truck B is closer to (0,0)\n\n\n");
46     else
47         return ("Truck A is closer to (0,0)\n\n\n");
48 }// method determineClosest
49
50 //String representation of the object
51 public String toString()
52 {
53     return ("/n");
54 }// method toString
55 }
56
57
```