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//AP Comp Sci

//1st Period

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public class Point

{

private double x;

private double y;

//Sets default points.

public Point ()

{

x = 1;

y = 1;

}

//Calculates the Manhattan Distance.

public double manhattanDistance(Point input)

{

return Math.abs(input.x-x) + Math.abs(input.y-y);

}

public boolean isVertical(Point input)

{

if(x == input.x)

{

return true;

}

else

{

return false;

}

}

public boolean isHorizontal(Point input)

{

if(y == input.y)

{

return true;

}

else

{

return false;

}

}

public double slope(Point input)

{

return (input.y-y)/(input.x-x);

}

public double distance(Point input)

{

return Math.sqrt((Math.pow((input.x-x),2) + Math.pow((input.y-y),2)));

}

public String toString(Point input)

{

return ("The points are " + "(" + x + "," + y + ")" + "and (" + input.x + "," + input.y + ").");

}

}