Problem Set

To find out the perpendicular distance between a point and a straight line.

Let a point be $p(x1, y1)$ and the equation of a straight line be $Ax + By + C$ The formula for the perpendicular distance d between the point $p(x1, y1)$ and the straight line $Ax + By + C$ is:

$$d = \frac{|Ax_1 + By_1 + C|}{\sqrt{A^2 + B^2}}$$

Write a **Class Based** Java code for finding the perpendicular distance from the point to the straight Line.

Some Hints:

- Create a class for point
- Create a class for the straight line
- Use the math library.

Note: The output should be formatted to have 3 digits after decimal places.

Input: 1 2 3 4 5

Output: The values of d = 2.345