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public class App {

    public static void drawLine(int x1, int y1, int x2, int y2) {
        int dx = x2 - x1;
        int dy = y2 - y1;
        int slopeError = dy - dx;

        int x = x1;
        int y = y1;

        int arraySize = Math.max(dx, dy) + 1;

        String[] plotPoints = new String[arraySize];

        plotPoints[0] = "(" + x + ", " + y + ")";

        for (int i = 1; i < arraySize; i++) {
            while (slopeError >= 0) {
                y++;
                slopeError -= dx;
            }
            x++;
            slopeError += dy;
            plotPoints[i] = "(" + x + ", " + y + ")";
        }

        for (String point : plotPoints) {
            System.out.println(point);
        }
    }

    public static void main(String[] args) throws Exception {
        drawLine(1, 1, 8, 5);
    }
}

```