**Q6. Intersection Point(s) (15 marks):**

A parabolic curve is given by the equation $y = x^2 - 2x - 3$. A linear line with the equation $y = mx + c$ may or may not intersect with the given parabolic curve. Your task is to compute the intersection point(s) between the linear line and the given parabolic curve.

**Write a programme to**

**Input, in sequence,** the values of $m$ and $c$ of the linear line $y = mx + c$, where $m$ and $c$ are both real numbers.

**Output, in accordance with the following requirement**

**Case 1:** If there is no intersection between the parabolic curve and the linear line, then the output will display "No intersection".

**Case 2:** If the parabolic curve intersects with the linear line at a single point, the output will display "One intersection"; the subsequent line will display the intersection point with the $x$ coordinate to be displayed first, followed by a comma, a space, and then the $y$ coordinate.

**Case 3:** If the parabolic curve intersects with the linear line at two different points, then the output will display "Two intersections" in the first line; subsequently, the second and third lines will be the intersection points, with the larger $x$ coordinate, a comma, a space and the corresponding $y$ coordinate in the second line, and then the smaller $x$ coordinate, a comma, a space and the corresponding $y$ coordinate in the third line.

**Note:** All coordinate values must be rounded to 7 decimal places; all digits must be displayed.

**试题 6. 交点（15 分）：**

某抛物线的等式可写为 $y = x^2 - 2x - 3$。另一等式为 $y = mx + c$ 的直线，与给定的抛物线有可能相交。你的任务是找出这条直线和给定抛物线的交点。

**试写一程式以**

**依序输入,** $m$ 和 $c$ 的值，已知两者皆为实数，且它们是组成直线 $y = mx + c$ 的参数。

**根据以下要求输出**

**情况 1:** 假如直线和给定的抛物线没有交点，则输出"No intersection".

**情况 2:** 假如直线和给定的抛物线只有一个交点，则第一行输出"One intersection"；在接着的一行中显示交点的坐标，即，先输出 $x$ 的值，跟着一个逗号，一个空格，再输出 $y$ 的值。

**情况 3:** 假如直线和给定的抛物线有两个交点，则第一行输出 "Two intersections"；接着第二行输出 $x$ 值较大的交点坐标（格式为：$x$，逗号，空格，以及对应的 $y$），然后第三行则输出 $x$ 值较小的交点坐标（格式为：$x$，逗号，空格，以及对应的 $y$）。

**注意：** 所有坐标值必须近似并显示至小数点后 7 位数。

**Example (例子)**

| Sample Input | Sample Output |
|---|---|
| **0.5 1** | Two intersections<br>3.6084953, 2.8042476<br>-1.1084953, 0.4457524 |
| **0 0** | Two intersections<br>3.0000000, 0.0000000<br>-1.0000000, 0.0000000 |
| **1 -10** | No intersection |
| **0 -4** | One intersection<br>1.0000000, -4.0000000 |