L Drawing Polygon

In Euclidean geometry, a regular polygon is a polygon that is equiangular (all angles are equal in measure) and equilateral (all sides have the same length). Tara drew a regular convex polygon on a paper plane. The polygon has **N** vertices. The lower side of the polygon is parallel to the X-axis. The lower side is the side having minimum value of (y_a + y_b) among all sides of that polygon, where y_a and y_b are the **y** coordinate of two different end points of a side. Unfortunately her friend Gudu lost the paper. Tara only can remember the length of each side **L** and lower left point P_0**(x, y)** of that polygon. Help Tara to draw the polygon again.

Input:

First line of the input contains a positive integer **T(<=20)** denoting the number of test cases. Each of the following **T** lines contains four integers. **N (2<N<=1000)**, **L (0<L<=100)**, **x (|x|<=100)**, **y (|y|<=100)** as described before.

Output:

For each case, print the case number in a single line first. Print **N** points of the polygon in next **N** lines. Each point consists of two numbers rounded to six decimal places. Points should be ordered by counter-clockwise starting from P_0. Errors less than 10^{-4} will be ignored. Consecutive output set should be separated by a blank line. See sample output format.

Sample Input	**Sample Output**
2 4 5 0 0 5 5 0 0	Case #1: 0.000000 0.000000 5.000000 0.000000 5.000000 5.000000 0.000000 5.000000 Case #2: 0.000000 0.000000 5.000000 0.000000 6.545085 4.755283 2.500000 7.694209 -1.545085 4.755283

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