## Longest Intersection

Write a program that finds the **longest intersection**. You will be given a number **N**. On the next **N lines** you will be given **two ranges** in the format: **"{first start},{first end}-{second start},{second end}"**. Find the **intersection** of these two ranges and **save the longest one of all N** intersections. At the end print the **numbers** that are included in the longest intersection and its length in the format: **"Longest intersection is [{longest intersection}] with length {length longest intersection}"**

***Note: in each range, there will always be intersection. If there are two equal intersections, print the first one.***

### Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comment** |
| 3  0,3-1,2  2,10-3,5  6,15-3,10 | Longest intersection is [6, 7, 8, 9, 10] with length 5 | The intersection of [0-3] and [1-2] is [1-2] (length 2)  The intersection of [2-10] and [3-5] is [3-5] (length 3)  The intersection of [6-15] and [3-10] is [6-10] (length 5) - which is the longest |
| 5  0,10-2,5  3,8-1,7  1,8-2,4  4,7-2,5  1,10-2,11 | Longest intersection is [2, 3, 4, 5, 6, 7, 8, 9, 10] with length 9 |  |