

# Challenge

The impact factor (IF) of an academic journal is a scientometric index which reflects the yearly average number of citations to recent articles published in that journal. In any given year, the impact factor of a journal is the number of citations, received in that year, of articles published in that journal during the two preceding years, divided by the total number of **citable items** published in that journal during the two preceding years:

$$\text{IF}_y = \frac{\text{Citations}_{y-1} + \text{Citations}_{y-2}}{\text{Publications}_{y-1} + \text{Publications}_{y-2}}$$

# Standard input

The first line is the number of records to process. The second line is the publications to be included in the report. The **publicationNumber** is the unique key to identify the publication. The **publicationTitle** is the title of the publication. The **articleCounts** array contains the **year** and **articleCount** for that year and publication.

The subsequent lines are JSON packets containing citations for random publications. The **paperCitations** contains an array, called **ieee**, with information about the cited papers. The **publicationNumber** in the array is the publication number of the publication the cited article appears in. The **year** is the year the article was published.

## Standard output

List the publication title and its Impact Factor. Order by descending Impact Factor. Format the output with one journal name per line and with the name and the score (with two decimal places) separated by a colon. Example: Letters on IEEEExtreme: 1.78

In case multiple publications have the same impact factor, print them in alphanumerical order.

## Constraints and notes

- The maximum number of records is 1001

Input	Output	Explanation
<pre>6 {"publications": [{"publica {"publisher": "IEEE", "title {"publisher": "IEEE", "title {"publisher": "IEEE", "title {"publisher": "IEEE", "title {"publisher": "IEEE", "title</pre>	<pre>Letters on IEEEExtreme: 1.78 Journal of 24 hours program</pre>	<p>Taking the second line of the input you must generate the Impact Factor for publications <b>Letters on IEEEExtreme</b> and <b>Journal of 24 hours programing. Letters on IEEEExtreme</b> had the greatest Impact factor so it appears first in the output.</p>