

KMIT-NFS-1004	<b>KMIT – NIRANTHAR</b> <b>Season-1</b> <b>Programming Assignments</b>	Saturday 19th OCT 2019
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## 1 Lazy Assistant

The TA (Teaching Assistant) of Mr.Mohan does not like to waste time on unnecessary work. Mr.Mohan has given him a task of rounding off student's score to the nearest 5s so that they can be graded.

### Rules:

1. If the difference between the score and the next multiple of 5 is less than 3 , it is rounded up to the next multiple of 5 .
  2. If the score is less than 38 the student is considered failed because rounding those scores will result in a number less than 40, TA will not work on rounding off those scores.
- Given  $s$  student's scores of Mr.Mohan, write a program to round off scores.

### Constraints:

$1 \leq s(\text{number of students}) \leq 60$   
 $0 \leq p(\text{Each student's score}) \leq 100$

### Input:

The first line contains a single integer,  $s$ , the number of students  
Each line  $j$  of the  $s$  subsequent lines contains a single integer,  $p$ , denoting student  $j$ 's score.

### Output:

For each  $p$ , print the rounded score on a new line.

### Input/Output

Input	Output	Comments
4		<b><u>Explanation:</u></b>
83	85	<b><u>Student 1</u></b> scored 83 , and the next multiple of 5 from 83 is 85. Since $85-83 < 3$ , the student's score is rounded to 85.
77	77	<b><u>Student 2</u></b> scored 77 , and the next multiple of 5 from 77 is 80. Since $80-77=3$ , the score will not be modified and the student's final score is 77 .
38	40	<b><u>Student 3</u></b> scored 38 , and the next multiple of 5 from 38 is 40. Since $40-38 < 3$ , the student's score will be rounded to 40.
23	23	<b><u>Student 4</u></b> scored 23 a score below 38, so the score will not be modified and the student's final score is 23.
3		<b><u>Student 1</u></b> scored 32 a score below 38, so the score will not be modified and the student's final score is 32
32	32	
73	75	<b><u>Student 2</u></b> scored 73 , and the next multiple of 5 from 73 is 75. Since $75-73 < 3$ , the score will be modified and the student's final score is 75 .
55	55	
112	-1	<b><u>Student 3</u></b> scored 55 , and the next multiple of 5 from 55 is 55. Since $55-55=0$

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	<3, the student's score will be rounded to 55. <b>Student 4</b> scored 112 , violates the constraint hence prints -1
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## 2. Taxonomy Search

In linguistics, **hyponym** and hypernym are a *type-of* relationship taxonomy among the words or phrases based on their meaning. A word 'W2' is said to be hyponym of another word 'W1' if the meaning of 'W2' is included within 'W1'. If 'W2' is hyponym of 'W1' then 'W1' is said to be hypernym of 'W2'.

For example, cabbage and spinach are hyponym of greens, peas and beans are hyponyms of pulses, carrots and turnips are hyponym of roots, and potatoes and yams are hyponyms of tubers. Greens, pulses, roots and tubers are inturn hyponyms of vegetables. The taxonomy can be viewed in the following url.

<https://tinyurl.com/yd7se5pv>

In the above taxonomy, vegetables is at level 0, greens, pulses, roots and tubers are at level 1 and cabbage, spinach, peas, beans, carrots, turnips, potatoes and yam are at level 2.

Another example taxonomy can be seen at url:

<https://tinyurl.com/y88ywkbbs>

Level 0 – Color

Level 1 – Purple, Red, Blue, Green

Level 2 of Purple – Crimson, Violet, Lavender

Given 'n' taxonomies of maximum level as 2, a name 'p' at level 0, a name 'l1' at level 1 and a name 'c' level 2 check p, l1 and c are at proper level of the same taxonomy.

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## Input Format

First line contains the number of taxonomies, n

Next few lines contains details of each taxonomy in the following order

Name of the element in the level 1 of the taxonomy

Next line contains some number of elements in level 1 of the taxonomy separated by a space

Next few lines contains the details of elements in level2 of the taxonomy separated by a space, the first string here is the name of the element in level1 and remain strings are the children of the element in level1

If no element is present at level2 for an element in level1 then None is given

Next line contains the name of the element to be checked at level 0, p

Next line contains the name of the element to be checked at level 1, l1

Next line contains the name of the element to be checked at level 2, l2

## Output Format

Print Taxonomy present if elements p,l1 and c belong to the same taxonomy at appropriate levels and Taxonomy not present otherwise

## Illustration of Input

The **vegetable taxonomy** is represented as follows:

vegetables

greens pulses roots tubers

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pulses peas beans

roots carrots turnips

greens cabbage spinach

tubers potatoes yams

**Color taxonomy is represented as:**

color

purple red blue green

purple crimson violet lavender

None

None

None

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#### Input/Output

Input	Output	
<b>1</b> vegetable greens pulses roots tubers tubers potatoes yams greens cabbage spinach pulses peas beans roots carrots turnips vegetable greens cabbage	Taxonomy present	
<b>1</b> vegetable greens pulses roots tubers greens cabbage spinach pulses peas beans roots carrots turnips tubers potatoes yams vegetable roots potatoes	Taxonomy not present	