Grading Students

locked

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HackerLand University has the following grading policy:

- Every student receives a $grade$ in the inclusive range from 0 to 100.
- Any $grade$ less than 40 is a failing grade.

Sam is a professor at the university and likes to round each student's $grade$ according to these rules:

- If the difference between the $grade$ and the next multiple of 5 is less than 3, round $grade$ up to the next multiple of 5.
- If the value of $grade$ is less than 38, no rounding occurs as the result will still be a failing grade.

For example, $grade = 84$ will be rounded to 85 but $grade = 29$ will not be rounded because the rounding would result in a number that is less than 40.

Given the initial value of $grade$ for each of Sam's n students, write code to automate the rounding process.

Function Description

Complete the function *gradingStudents* in the editor below. It should return an integer array consisting of rounded grades.

gradingStudents has the following parameter(s):

- *grades*: an array of integers representing grades before rounding

Input Format

The first line contains a single integer, n, the number of students.
Each line i of the n subsequent lines contains a single integer, $grades[i]$, denoting student i's grade.

Constraints

- $1 \leq n \leq 60$
- $0 \leq grades[i] \leq 100$

Output Format

For each $grades[i]$, print the rounded grade on a new line.

Sample Input 0

```
4
73
67
38
33
```

Sample Output 0

```
75
67
```

```
40
33
```

Explanation 0

ID	Original Grade	Final Grade
1	73	75
2	67	67
3	38	40
4	33	33

1. Student 1 received a 73, and the next multiple of 5 from 73 is 75. Since $75 - 73 < 3$, the student's grade is rounded to 75.
2. Student 2 received a 67, and the next multiple of 5 from 67 is 70. Since $70 - 67 = 3$, the grade will not be modified and the student's final grade is 67.
3. Student 3 received a 38, and the next multiple of 5 from 38 is 40. Since $40 - 38 < 3$, the student's grade will be rounded to 40.
4. Student 4 received a grade below 38, so the grade will not be modified and the student's final grade is 33.

```python
#!/bin/python3

import math
import os
import random
import re
import sys

#
# Complete the 'gradingStudents' function below.
#
# The function is expected to return an INTEGER_ARRAY.
# The function accepts INTEGER_ARRAY grades as parameter.
#

def gradingStudents(grades):
    for x,i in enumerate(grades):
        if(i>=38) and (i%5)>=3:
            grades[x]=i+5-(i%5)
    return (grades)

if __name__ == '__main__':
    fptr = open(os.environ['OUTPUT_PATH'], 'w')

    grades_count = int(input().strip())

    grades = []

    for _ in range(grades_count):
        grades_item = int(input().strip())
        grades.append(grades_item)

    result = gradingStudents(grades)

    fptr.write('\n'.join(map(str, result)))
    fptr.write('\n')
```

```
37
38      fptr.close()
39
```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code

Testcase 0 ✔

Congratulations, you passed the sample test case.

Click the **Submit Code** button to run your code against all the test cases.

Input (stdin)

```
4
73
67
38
33
```

Your Output (stdout)

```
75
67
40
33
```

Expected Output

```
75
67
```

```
40
33
```