Grading Students

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Problem Solving ★★★★

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Problem Submissions Leaderboard Editorial

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.

Examples

- $grade = 84$ round to 85 (85 - 84 is less than 3)
- $grade = 29$ do not round (result is less than 38)
- $grade = 57$ do not round (60 - 57 is 3 or higher)

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 $gradingStudents$ with the following parameter(s):

- $int\ grades[n]$: the grades before rounding

Returns

- $int[n]$: the grades after 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, $grades[i]$.

Constraints

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

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

Change Theme Language Python 3

```
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):
    # Write your code here
    # Write your code here
    for i in range(len(grades)):
        if grades[i] < 38:
            continue

        next_multiple = (grades[i]//5+1)*5
        if next_multiple - grades[i] < 3:
            grades[i] = next_multiple
    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)
```

EMACS Line: 27 Col: 5

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

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14% 528.8/850

Congratulations

You solved this challenge. Would you like to challenge your friends?

Next Challenge

- Test case 0
- Test case 1
- Test case 2
- Test case 3
- Test case 4
- Test case 5
- Test case 6

Compiler Message

Success

Input (stdin) Download

```
4
73
67
38
33
```

Expected Output Download

```
75
67
```