Question 2

Mike is experimenting with automated marking of assignments. He wrote a file, "answers.txt", which contains the correct answers, one per line. The first three lines of the file are shown below:

```
A
C
D
```

The correct response for question 1 is 'A', for question 2 is 'C', and for question 3 is 'D'. There are at most 30 questions in the assignment. A similar file, "students.txt", contains student answers. The first line in the file is an integer indicating how many students did the assignment. After that, each student's responses are recorded. Students may answer with a single character from A to E, or may enter the character Z to indicate that they chose not to answer the question. The first few lines of the file are shown below:

```
17
A
Z
```

Students get 5 marks for each correct answer, -2 marks for each incorrect answer, and 0 marks for any questions they chose not to answer.

1. Write a function that receives a student's answer to a question and the correct answer. Return the score they received on that question.
2. Write a function that receives a total grade that the student received, and any other information you think they need, and returns the student's grade out of 100.
3. Write a main program that performs the following tasks:

- Opens both input files and verifies that they are opened.
- Reads "answers.txt" into an array, and determines how many questions were asked.
- Reads the file "students.txt" and outputs the score out of 100 for each student.
- Outputs the class average at the end.

Your main function must call functions 1. and 2. above.