One of the services of banks is to lend money to their customers. The loan is characterized by an initial capital and by a number of periods (for instance, months) of duration. At the end of the loan all the money must have been paid back to the bank, plus an interest that represents the money the bank earns. The interest rate is usually specified on a yearly basis. For the sake of clarity lets use an example: you get a loan of 5000 €, for three years, at an interest rate of 6%. One possibility is that you collect the money to pay back at home and, after three years, you pay to the bank all the 5000 € plus 3*0.06*5000=900 € of interest. Another possibility is that you periodically pay a certain amount that we will assume is always the same, part of which is to pay the interest for the last period and the rest is to subtract to the debt. This way the capital on loan will decrease since the first period and the interest on the next period will be smaller. The total amount paid in this modality is obviously less than in the case you keep all the money until the end of the loan.

Given an initial capital on loan, an yearly interest rate, a duration for the loan, determine the value of a fixed monthly payment such that in the last payment the capital on loan is reduced to zero and all the interest have been properly paid.

Input

The input begins with a single positive integer on a line by itself indicating the number of the cases following, each of them as described below. This line is followed by a blank line, and there is also a blank line between two consecutive inputs.

One line with three integers, separated by single spaces: the initial capital in euros, the yearly interest rate in percentage, and the duration in months.

Output

For each test case, the output must follow the description below. The outputs of two consecutive cases will be separated by a blank line.

One line containing the value in euros of the monthly payment rounded to cents.

Sample Input

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1

5000 6 36
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Sample Output

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152.11
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