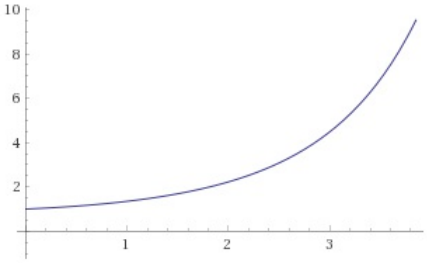
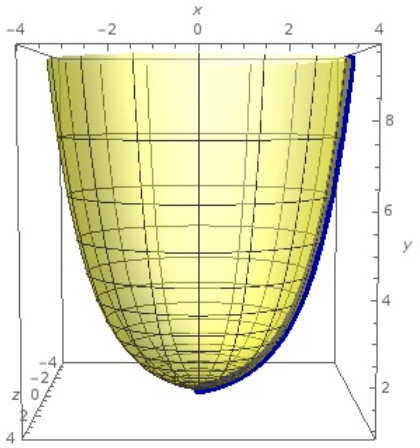
Vodka Volume

Vincent has been working on a machine that prints out precise shapes... with glass! His first project is to make shot glasses and cups for his friends so they can celebrate.

When it comes to designing glasses, Vincent traces a function in 2D and revolves it about the y-axis, producing a solid shape. He wants to use a family of curves $y = exp(Ax^2 + Bx)$ for the interior surface, where $exp(x)$ is the natural exponential function, $x \geq 0$, and A and B are positive parameters of his choosing. He measures x and y in centimeters. The following images show this process for a curve with $A = 0.1$ and $B = 0.2$:





Vincent wants his glasses to hold a certain volume of liquid V. Please determine how tall a given glass design would need to be to contain that volume.

Input Format

The input will begin with a line containing an integer T indicating the number of test cases to follow. Each case will consist of three numbers A, B, and V, separated by spaces. The numbers A and B will describe the curvature of Vincent's glass. They will be in the range $[0.01, 0.99]$ and will have exactly 3 digits. The number V will be an integer indicating the desired volume (measured in cubic centimeters).

Constraints

$1 \leq T \leq 500$
$0.01 \leq A, B \leq 0.99$
$10 \leq V \leq 250$

Output Format

For each test case, output a single line indicating the height that Vincent's glass should have so that it contains a volume V. The height must be given in centimeters and must be rounded up to 2 decimal places. Be sure to include trailing zeroes as necessary.

Sample Input 0

```
3
0.05 0.01 44
0.03 0.03 74
0.10 0.20 250
```

Sample Output 0

```
2.45
```

2.60
9.54

Explanation 0

In the first case, the glass contains about $44\,cm^3$ when its height is about $2.45\,cm$. In the second case, the glass contains about $74\,cm^3$ when its height is about $2.60\,cm$. In the third case, the glass contains about $250\,cm^3$ when its height is about $9.54\,cm$. Cheers!