# Problem A. Fermat's Optimization Problem

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|---|---|
| Input file: | `standard input` |
| Output file: | `standard output` |
| Time limit: | 2s |

Consider the error function $F(x, y, z, n) = |x^n + y^n - z^n|$, where $|v|$ means the absolute value of $v$. Given two positive integers $n$ and $z$, our problem is to find two positive integers $x$ and $y$ such that $x < y < z$ and the error value $F(x, y, z, n)$ is minimized.

For example, if we are given $n = 3$ and $z = 9$, then the solution is: $x = 6$ and $y = 8$. This solution yields the error value 1.

## Input

The first line contains the number of test cases $T$ ($T < 10$). Each subsequent line corresponds to a test case, which contains two positive integers $n$ ($2 < n < 10$) and $z$ ($1 < z < 100000$).

## Output

For each test case, output the value of $x$, $y$, and $F(x, y, z, n)$ in a line, separated by spaces.

## Example

| standard input | standard output |
|---|---|
| 2<br>3 9<br>3 7 | 6 8 1<br>5 6 2 |