

Geometric Progression

Input:

a = 2

n = 10

Output:

1024

Explanation:

$a_n = a * r^{n-1} = 2 * 2^{10-1} = 1024$

The approach to calculate the nth term of a geometric sequence (also known as a geometric progression) is to use the formula: $a_n = a * r^{n-1}$

Here, 'a' is the first term of the geometric sequence, 'r' is the common ratio between consecutive terms, and 'n' is the term number.

To calculate the nth term, we substitute the values of 'a', 'r', and 'n' in the formula and solve for 'an'.

For example, if the first term of the geometric sequence is 2, the common ratio is 2, and the term number is 10, we can calculate the 10th term as follows:

$a_n = a * r^{n-1} = 2 * 2^{10-1} = 2 * 1024 = 2048$

Therefore, the 10th term of the geometric sequence is 2048.

```
#include <bits/stdc++.h>
using namespace std;

void utility(int a, int r, int n){
    int ans = a * pow(r, n-1);
    cout << ans << endl;
}

int main() {

    int t; cin>>t;
    while(t-- > 0) {
        int a, n;
```

```
        cin>>a>>n;  
        int r = 2;  
        utility(a, r, n);  
    }  
  
}
```