Problem A. Hex-a-bonacci

Time limit 1000 ms
Mem limit 65536 kB

Given a code (not optimized and might have overflow problems), and necessary inputs, you have to find the output of the code. The code is as follows:

```
int a, b, c, d, e, f;
int fn(int n) {
    if (n == 0) return a;
    if (n == 1) return b;
    if (n == 2) return c;
    if (n == 3) return d;
    if (n == 4) return e;
    if (n == 5) return f;
    return fn(n-1) + fn(n-2) + fn(n-3) + fn(n-4) + fn(n-5) + fn(n-6);
}
int main() {
    int n, cases;
    scanf("%d", &cases);
    for (int caseno = 1; caseno <= cases; ++caseno) {
        scanf("%d %d %d %d %d %d %d", &a, &b, &c, &d, &e, &f, &n);
        printf("Case %d: %d\n", caseno, fn(n) % 10000007);
    }
    return 0;
}
```

Input

Input starts with an integer **T (≤ 100)**, denoting the number of test cases.

Each case contains seven integers **a, b, c, d, e, f** and **n**. All integers will be non-negative and **0 ≤ n ≤ 10000** and others will fit into 32-bit integers.

Output

For each case, print the output of the given code. The given code may have integer overflow

problem in the compiler, so be careful.

Sample

Input	Output
6 0 1 2 3 4 5 20 1 2 3 4 5 6 10000 3 2 1 5 0 1 9 4 12 9 4 5 6 15 9 8 7 6 5 4 3 3 4 3 2 54 5 4	Case 1: 216339 Case 2: 5333347 Case 3: 79 Case 4: 16636 Case 5: 6 Case 6: 54