Problem 7—Recursive Definition

Professor Plum struggled with recursion initially, but he grew to love it! His favorite recursive definition is:

$M(n) = n$ for all $n < 3$,

$M(3) = 10$, and

$M(n) = M(n-2) - M(n-4) + M(n-5) - M(n-8)$ for all $n > 3$.

Input Format

The first line of input contains a positive integer *count* of the number of integers to follow. Each integer *n* will be on a line by itself and will be used to compute M(*n*).

Output Format

One output line corresponding to each input number. Each output line is of the format "M(*n*) = *d*" where *n* is the input number value and *d* is the corresponding function value. A space is on both sides of the equal sign.

Input Sample

```
5
8
15
-5
10
35
```

Output Sample

```
M(8) = 11
M(15) = 12
M(-5) = -5
M(10) = 15
M(35) = -1201
```