

## **Multiplying Ducks**

Input File: ducks.txt

Ducks are the main species that live on Duck Island. The island contains a variety of food for the ducks and no predators, so the ducks grow in population very fast. Every 10 days, the duck population suddenly doubles. Every 24 days, one fourth of the duck population passes away from old age (if these two events occur on the same day, assume the population doubles before any ducks pass away). Given the initial population on January 1st, find the population of ducks on a later date in the same year. Assume that it is not a leap year, meaning February has 28 days, January, March, May, July, August, October, and December have 31 days, and the rest have 30 days.

### **Input:**

The first line contains an integer N. The following N lines each contains an integer P, the initial population, a space, and then a date in the format of mm/dd.

### **Output:**

Output the duck population on the given date.

### **Example Input:**

```
3
10 02/01
55 06/17
1 12/31
```

### **Example Output:**

```
60
641520
918330048
```