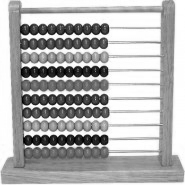
## Problem 5 – Na Baba mi Smetalnika



### See this mad baba? She is crazy I tell you! But this is life and you are going to be stuck with her for all the lqto, so better pay attention!

The baba has very **izbuhliva** personality, so every time you mess up something she smacks your head with her **tochilka**. She mainly spends her **vreme** in **pletene** of sweaters, which she sells to important **klienti** on the **selski** market.

Every sweater has a different **sharka**, so she needs to **calculate** how many **reda** to use of one **prejda** and how many of some other kind. She figured out a **formula** that helps her to **izchisli** the right amount of rows and **brimki**.

**The formula is as follows**: She uses a different **smetalo** for every sweater, and every **smetalo** has different number of **topchenca**. As she **plete**, she moves the **topchenca** to the **left** or **right** side of the **smetaloto**. If she makes a mistake she **resets** the **smetaloto** by placing all the **topchenca** on the left most side.

Once she is done she **izchislqva** the **sum** of all the lines and then multiplies them by the **broikata** of all columns that don’t have any **topchenca** in them.

Since you are spending the summer with her, she put you in charge of the **smetaloto**, but be **vnimatelen**, because if you **opleskash** the formula she will mess up the sweater and you will get smacked. Every time she smacks your head some **mozuchni** cells are dying and you **lose** a part of your **genialnost**.

Quick! Use what **mozuk** you have left to create a computer program, that can do your **rabota** for you, before you get so **tup** that you cannot think straight from getting smacked on the head by this **luda** baba!

**How the smetalnika works**:

You need to know how wide it needs to be, so that it can calculate the **sharkata** for the current sweater. Listen to the **babata**, she will tell you the **width** at the beginning. After that she will give you **8 positive numbers** that you have to magically **preobrazuvash** into bitwise data and use the bits as **topchenca** for your **smetalnik**.

After this is done she will start giving you **commands**: Whenever she makes a mistake she will tell you to “**reset**” the **smetaloto**, so she can start over. Then you must **burzo** put all the **topchenca** to the left most corner. When she tells you to slide “**right**” or “**left**”, this means that you need to put your **prust** on a selected line and position and to slide all the **topchenca** to the left or to the right most corner of the **smetaloto**.

Once she is **gotova** she will tell you to “**stop**” and tell her the result. You better do it fast or that brain cells killing smack is coming right at you!

### Input

### The input data should be red from the console.

On the first line you will be given the **width** of the smetaloto.

On the next **8 lines** you will be given 8 numbers, one number on each line, so you can use them to understand where to put your **topchenca**.

After that you will receive a random number of commands - “**reset**”, “**right**” and “**left**”. If there is no **topchence** where she tells you to slide your finger, you must do it either way, since she is a little **kiorava**, and sometimes misses the right position. When you slide you must always start from where she instructs you and stop when you reach the opposite **krai** of the **smetaloto**.

The program must end when the “**stop**” command is given. The result must be printed right afterwards.

### Output

The output data should be printed on the console.

The output result is the **sum** of all the lines as numbers **multiplied** by the number of columns that don’t have any **topchenca** in them.

### Constraints

* The **width of the smetaloto** will be from **5 to 32** inclusive.
* The **eight numbers** will be from **0 to 2 147 483 647** inclusive.
* The **line** will be from **0** to **7** inclusive.
* The **prust position** will be from **-50 to 50** inclusive.
* There will be no **topchenca** outside of the **smetaloto** at any given time.
* Allowed work time for your program: 0.1 seconds.
* Allowed memory: 16 MB.

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| 1 |  |  |  |  | ■ | ■ | ■ | ■ | 15 |
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|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
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| 1 | ■ | ■ | ■ | ■ |  |  |  |  | 240 |
| 2 | ■ | ■ | ■ | ■ |  |  |  |  | 240 |
| 3 | ■ | ■ | ■ | ■ |  |  |  |  | 240 |
| 4 | ■ | ■ | ■ | ■ |  |  |  |  | 240 |
| 5 | ■ | ■ | ■ | ■ |  |  |  |  | 240 |
| 6 | ■ | ■ | ■ | ■ |  |  |  |  | 240 |
| 7 | ■ | ■ | ■ | ■ |  |  |  |  | 240 |

### Examples

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| **Example**  **input** | **Example**  **output** |
| 8  156  15  114  53  240  29  172  85  right  0  4  left  2  7  reset  stop | 7680 |