Problem E Input File: e.in Output: to monitor

Problem E: The Casual Philanthropist?

Sid is something of a casual philanthropist. Whenever he is checking out at the grocery store, he can't resist putting money in the little donation jar near the register. The amount that Sid donates is exactly determined by the order in which the clerk scans his grocery items and a peculiar set of rules.

Sid mentally puts items into groups of three as they are scanned. For each group of 3 items:

- If an item has an even price, Sid's donation will be half of that item's price.
- If a following item also has even price, Sid will donate half of that item's price instead, but only if it is less than the amount determined by previous items in the group.
- If the clerk scans an item that is divisible by 3, Sid donates nothing for that group, unless it is followed by an even priced item in the same group.

After all of Sid's groceries have been scanned, he only donates for the group with the greatest amount.

Input (from file e.in)

The input will be a comma separated list of integer values. Each line of comma separated integers will be considered an input. There will be no spaces between the numbers in the comma separated integers, and the end of an input will be a newline. All integers will be positive, and can be in any order.

Output (to monitor)

The output will be an integer amount of the donation, followed by a newline.

Take the following explanations for example:

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G is a list of prices scanned by the grocery clerk.

G = {1,4,2,7,4,8}

Result: 2

Clerk scans $1 item; group 1 amount: $0.

Clerk scans $4 item; new group 1 amount: $2

Clerk scans $2 item; new group 1 amount: $1

Clerk scans $7 item, group 2 amount is $0

Clerk scans $4 item, new group 2 amount is $2

Clerk scans $8 item, group 2 amount remains $2

Clerk scans $8 item, group 2 amount remains $2

Final donation determined by group 2: $2

G = {2,4,3,8}

Result: 4

Clerk scans $2 item; group 1 amount: $1

Clerk scans $4 item; group 1 amount: $1
```

Problem E Input File: e.in Output: to monitor

Clerk scans \$3 item; new group 1 amount: \$0

Clerk scans \$8 item, group 2 amount is \$4 Final donation determined by group 2: \$4

$$G = \{5\}$$
Result: 0

```
<u>Sample Input</u> 1,4,2,7,4,8
2,4,3,8
5
200,3
100,33,4,55,10,6,10,10,9,2,7
```

Sample Output 2

4

0

0

2