



## USACO 2016 FEBRUARY CONTEST, BRONZE PROBLEM 1. MILK PAILS

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English (en) ▼

Farmer John has received an order for exactly  $M$  units of milk ( $1 \leq M \leq 1,000$ ) that he needs to fill right away. Unfortunately, his fancy milking machine has just become broken, and all he has are three milk pails of integer sizes  $X$ ,  $Y$ , and  $M$  ( $1 \leq X < Y < M$ ). All three pails are initially empty. Using these three pails, he can perform any number of the following two types of operations:

- He can fill the smallest pail (of size  $X$ ) completely to the top with  $X$  units of milk and pour it into the size- $M$  pail, as long as this will not cause the size- $M$  pail to overflow.
- He can fill the medium-sized pail (of size  $Y$ ) completely to the top with  $Y$  units of milk and pour it into the size- $M$  pail, as long as this will not cause the size- $M$  pail to overflow.

Although FJ realizes he may not be able to completely fill the size- $M$  pail, please help him determine the maximum amount of milk he can possibly add to this pail.

**INPUT FORMAT (file pails.in):**

The first, and only line of input, contains  $X$ ,  $Y$ , and  $M$ , separated by spaces.

**OUTPUT FORMAT (file pails.out):**

Output the maximum amount of milk FJ can possibly add to the size- $M$  pail.

**SAMPLE INPUT:**

```
17 25 77
```

**SAMPLE OUTPUT:**

```
76
```

In this example, FJ fills the pail of size 17 three times and the pail of size 25 once, accumulating a total of 76 units of milk.

Problem credits: Brian Dean

Contest has ended. No further submissions allowed.