Peaches Today, Peaches Tomorrow  
[**http://nrich.maths.org/2312**](http://nrich.maths.org/2312)

**(i)** A little monkey had 60 peaches.

On the **first** day he decided to keep of his peaches. He gave the rest away. Then he ate one.

On the **second** day he decided to keep of his peaches. He gave the rest away. Then he ate one.

On the **third** day he decided to keep of his peaches. He gave the rest away. Then he ate one.

On the **fourth** day he decided to keep of his peaches. He gave the rest away. Then he ate one.

On the **fifth** day he decided to keep of his peaches. He gave the rest away. Then he ate one.

How many did he have left at the end?

**(ii)** A little monkey had some peaches.

On the **first** day he decided to keep of his peaches. He gave the rest away.Then he ate one.

On the **second** day he decided to keep of his peaches. He gave the rest away. Then he ate one.

On the **third** day he decided to keep of his peaches. He gave the rest away. Then he ate one.

On the **fourth** day he found he had only **one** peach left. How many did he have at the beginning?

**(iii)** A little monkey had **75**  peaches.

Each day, he kept a fraction of his peaches, gave the rest away, and then ate one.  
These are the fractions he decided to ***keep:***

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In which order did he use the fractions so that he was left with just one peach at the end?

**(iv)** Peach Rationing

Whenever the monkey has peaches, he always keeps a fraction of them each day, gives the rest away, and then eats one.

I wonder how long he could make his peaches last for?

Here are his rules:

* Each fraction must be in its simplest form and must be less than 1.
* The denominator is never the same as the number of peaches left (for example, if there were 45 peaches left, he would not be allowed to keep of them).

Can you start with fewer than 100 peaches and choose fractions so that there is at least one peach left after a week?

What is the longest that you can make them last, starting with fewer than 100 peaches?