

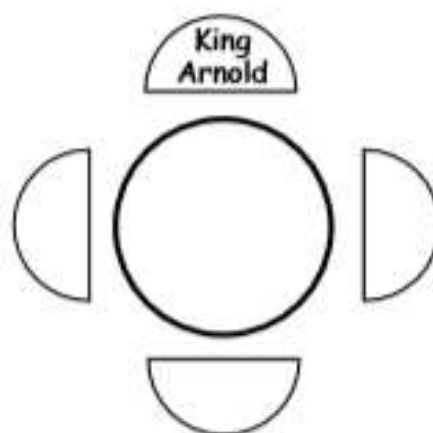
# King Arnold

King Arnold sits at a Round Table.



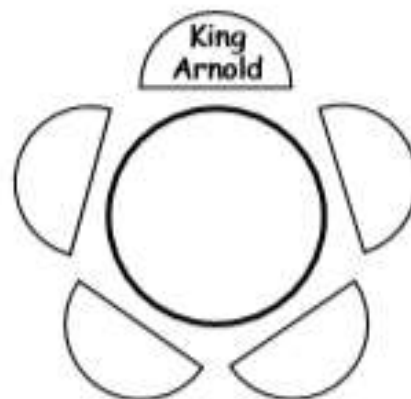
There are 3 empty seats.

In how many different ways  
can 3 knights sit in them?



What if there are 4 empty seats?

In how many different ways  
can 4 knights sit in them?



## Footsteps in the snow

Little has size 2 boots.



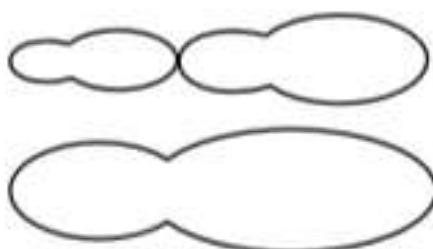
Middle has size 3 boots.

They are one and a half times the length of Little's boots.

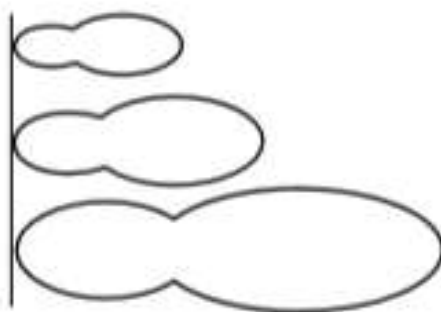


Big has size 5 boots.

A little boot and a middle boot are the same length as a big boot.



They start with the heels of their boots on the same line.



They each walk heel to toe.



When will all three heels be in line again?

## Ski lift

On a ski lift the chairs are equally spaced.  
They are numbered in order from 1.

Kelly went skiing.  
She got in chair 10 to go to the top of the slopes.

Exactly half way to the top, she passed chair 100  
on its way down.

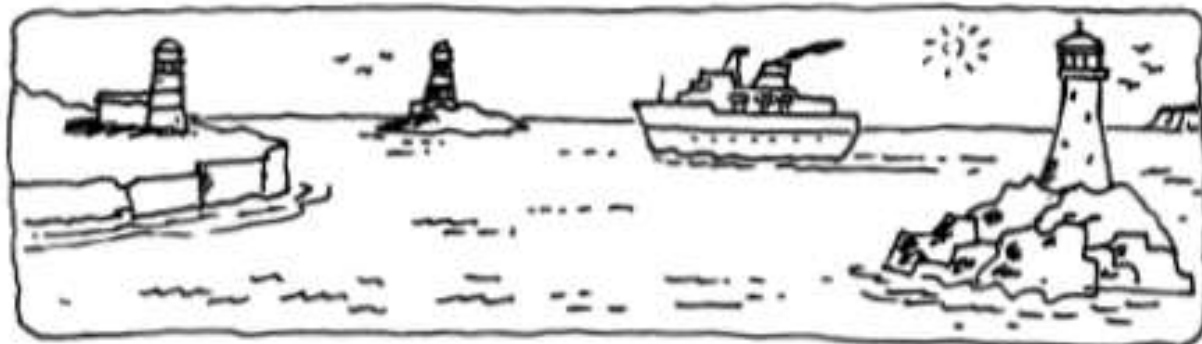
How many chairs are there  
on the ski lift?



Make up more problems like this.

## Lighthouses

On the coast there are three lighthouses.



The first light shines for 3 seconds, then is off for 3 seconds.

The second light shines for 4 seconds, then is off for 4 seconds.

The third light shines for 5 seconds, then is off for 5 seconds.

All three lights have just come on together.

When is the first time that all three lights will be off?

When is the next time that all three lights will come on at the same moment?