

Maybe we can write them in order.

We can start with all of the numbers in the 300's.

333 is smallest, then 334.

After that are 343 and 344.

333  
334  
343  
344

Then, we have four numbers in the 400's.

333  
334  
343  
344  
433  
434  
443  
444

That makes sense.

We found four 2-digit numbers.

34  
43  
33  
44

Which number did Grogg miss?

To make a 3-digit number...

...we can either put a 3 in the hundreds place...

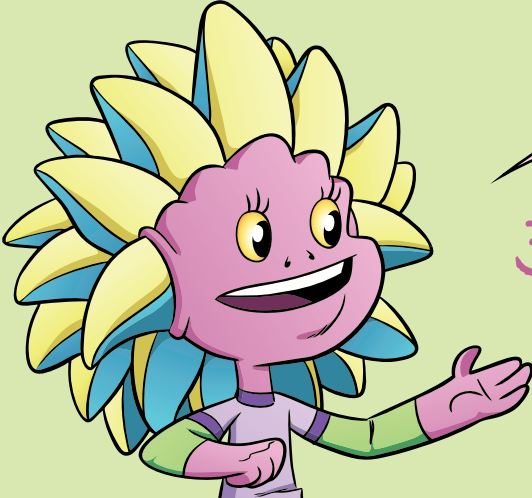
...or a 4 in the hundreds place.

That gives us 8 numbers.

I did something different.

334  
343  
333  
344

434  
443  
433  
444



I started with the only number that has three 3's and no 4's.

Then, I wrote the numbers that have two 3's and one 4.

The 4 can go in the ones, tens, or hundreds place.

333 334  
343  
433

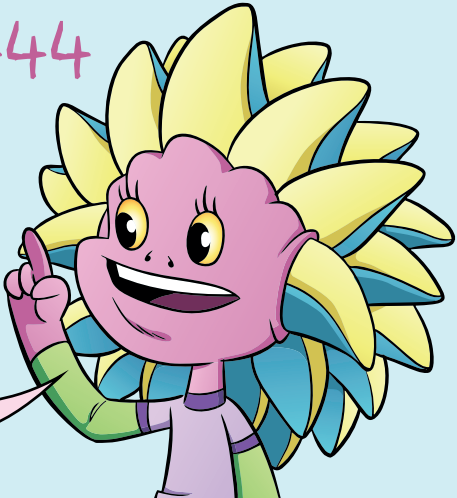
Next, I found three numbers that have one 3 and two 4's.

The 3 can go in the ones, tens, or hundreds place.

And finally, there's just one number with three 4's.

I found 8 numbers, too.

333 334 443 444  
343 434  
433 344



Excellent! The key to solving many problems like these is being organized.

How would you organize your work for this problem?

How many different three-digit numbers have digits that add up to 3?

