

21.04.20

I can divide numbers using different methods.

Starter – Play hit the button using division only.

<https://www.topmarks.co.uk/maths-games/hit-the-button>

# Division using partitioning

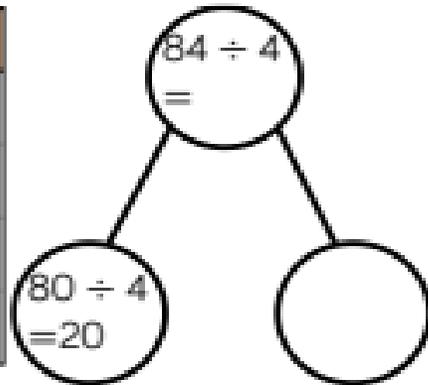
Jack is dividing 84 by 4 using place value counters.



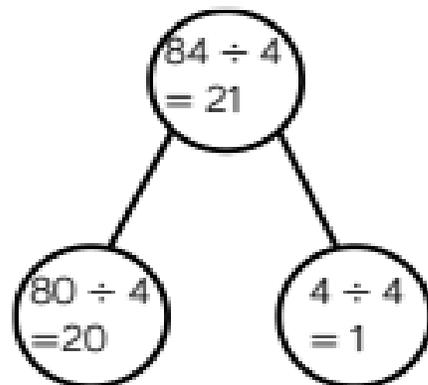
First, he divides the tens.

Then, he divides the ones.

Tens	Ones
10 10	
10 10	
10 10	
10 10	



Tens	Ones
10 10	1
10 10	1
10 10	1
10 10	1



First you can partition a number into tens and ones.

You can then divide the tens by the number.

You need to think about grouping the tens.

You might want to use objects in your home that could represent 10s or draw this out.

Next divide the 1s, again thinking about splitting the 4 into 4 equal groups.

Finally you have 2 tens and 1 ones, put the number together and the answer is 21.

1. Using this method can you try dividing the following numbers:

$$69 \div 3 =$$

$$88 \div 4 =$$

$$96 \div 3 =$$

Jack is dividing 84 by 4 using place value counters. 

10 10 10 10 10 10 10 10 1 1 1 1

First, he divides the tens. Then, he divides the ones.

Tens	Ones
10 10	
10 10	
10 10	
10 10	

$84 \div 4 =$

$80 \div 4 = 20$

Tens	Ones
10 10	1
10 10	1
10 10	1
10 10	1

$84 \div 4 = 21$

$80 \div 4 = 20$

$4 \div 4 = 1$

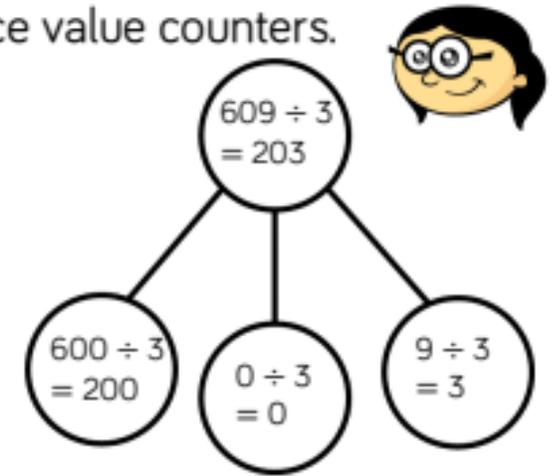
2. Using the same method, can you solve these questions:

$$906 \div 3 =$$

$$884 \div 4 =$$

Annie is dividing 609 by 3 using place value counters.

Hundreds	Tens	Ones
		
		
		



# Short Method

You can also solve division questions using the short division method.

Watch this video to find out more –

<https://www.youtube.com/watch?v=wm23qmDXFg>

The diagram illustrates the short division method for  $69 \div 3 = 23$ . It consists of three parts:

- A teal box containing the equation  $69 \div 3 = 23$ .
- A short division layout showing 3 dividing 69 to get 23.
- A bar model showing a large bar of 69 divided into three equal groups, each containing 23.

I need to divide 69 into three equal groups.

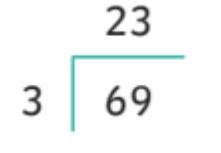
Start with How many times does 3 go into 6 = 2

Then how many times does 3 go into 9 = 3

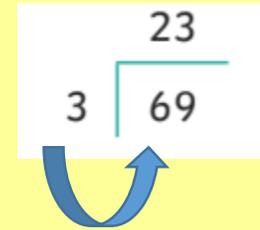
Remember you are trying to create equal groups.

# Top tips for using the short division method:

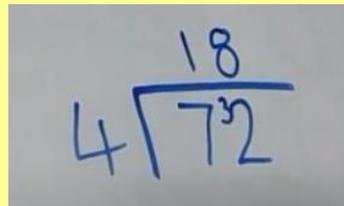
1. Make sure you lay your question out correctly.


$$\begin{array}{r} 23 \\ 3 \overline{) 69} \end{array}$$

2. Always start with the place value next to the line


$$\begin{array}{r} 23 \\ 3 \overline{) 69} \end{array}$$

3. Try and create equal groups. If you can't carry the number to the next place value.


$$\begin{array}{r} 18 \\ 4 \overline{) 72} \end{array}$$

3. Using the short division method find the answers to these questions:

$$65 \div 5 =$$

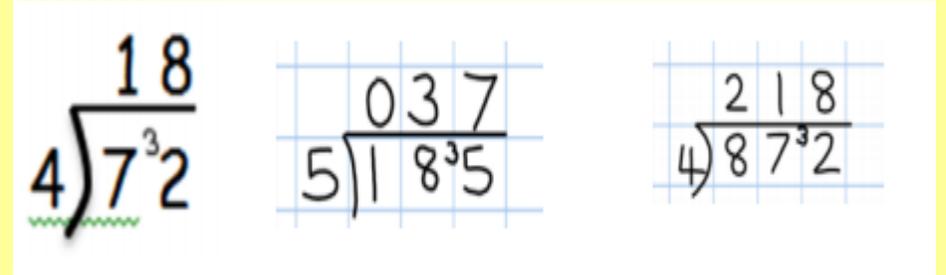
$$75 \div 5 =$$

$$84 \div 6 =$$

$$96 \div 3 =$$

$$524 \div 4 =$$

$$484 \div 2 =$$



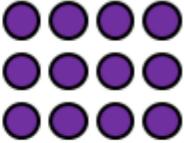
# Challenge:

1. Eva has 96 sweets. She shares them into equal groups. She has no sweets left over. How many groups could Eva have shared her sweets into?
2. Dora is calculating  $72 \div 3$ . Before she starts, she says the calculation will involve an exchange. Do you agree? Explain why.

3.

You have 12 counters and the place value grid. You must use all 12 counters to complete the following.

Hundreds	Tens	Ones



Create a 3-digit number divisible by 2  
Create a 3-digit number divisible by 3  
Create a 3-digit number divisible by 4  
Create a 3-digit number divisible by 5  
Can you find a 3-digit number divisible by 6, 7, 8 or 9?