

An introduction to Division! Day 1:

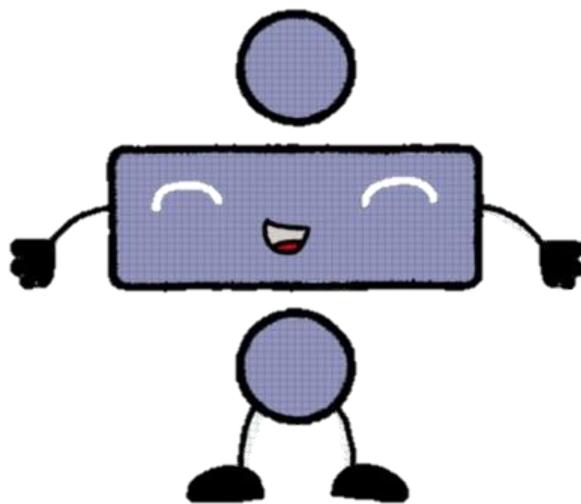
This activity pack contains lots of fun maths challenges all about division. Use your times tables to help you and try to show your thinking in different ways. For example, you could draw pictures or diagrams.

Before we start...



Spend 5-10 minutes revising your 3 times tables. You could say them out loud or write them on a piece of paper, you could even try mixing up the order!

Then on a piece of paper or a whiteboard, write down all the different words you can think of that means divide eg. Division, groups, share.



Challenge 1: Multiplying by 3

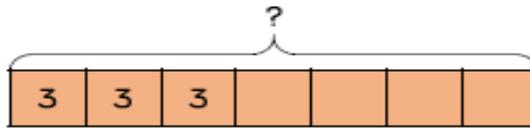
- There are five towers with 3 cubes in each tower.
How many cubes are there altogether?

$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$



- There are 7 tricycles in a playground.
How many wheels are there altogether?
Complete the bar model to find the answer.



- There are 3 tables with 6 children on each table.
How many children are there altogether?

$$\underline{\quad} \text{ lots of } \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

Key questions to think about

How many equal groups are there? How many are in each group? How much do we have altogether?

Can you represent the problem as a picture?

Can you write a number sentence to represent this problem?

THINKING...



Challenge 2: Dividing by 3

Now let's explore different ways we can divide by 3. This next challenge involves a method called grouping. We are going to explore dividing by 3 by sharing numbers into 3 groups and grouping numbers in 3's.

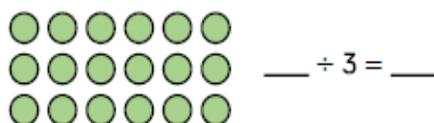
Watch this video to learn more about sharing:

https://www.youtube.com/watch?time_continue=57&v=nBa0wftKUJg&feature=emb_logo

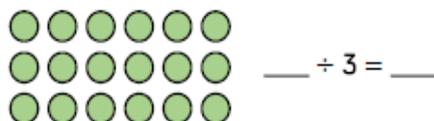
Watch this video to learn more about grouping:

<https://www.youtube.com/watch?v=linbjLi2K5s>

■ Circle the counters in groups of 3 and complete the division.



Circle the counters in 3 equal groups and complete the division.



■ There are 15 pieces of fruit. They are shared between 3 bowls equally. How many pieces of fruit are in each bowl?
Use cubes/counters to represent fruit and share between 3 circles.



■ Bobbles come in packs of 3
If there are 21 bobbles altogether, how many packs are there?

Can you group the numbers in 3's?

Can you share the numbers into three equal groups?

What is the difference between sharing and grouping?

Challenge 3

Now we are going to use our knowledge on multiplying and dividing by 3 to answer some number sentences.

Complete the number sentences.

1 triangle has 3 sides.

$1 \times 3 = 3$

3 triangles have ___ sides.

$__ \times __ = __$

___ triangles have 6 sides.

$__ \times __ = 6$

___ triangles have 3 sides.

$__ \times __ = 15$



Tick the number sentences that can be solved using the image.



$12 \div 3 = 4$

$12 \div 4 = 3$

$4 \times 3 = 12$

$3 \times 12 = 4$

$3 \div 4 = 12$

$3 \times 4 = 12$

Fill in the missing number facts.

$1 \times 3 = __$

$__ \times 3 = 30$

$2 \times __ = 6$

$8 \times __ = 24$

$__ = 3 \times 3$

$6 \times 3 = __$

$9 \times 3 = __$

$21 = __ \times 3$

Helpful hints for you to think about...

What other timestables might help you when answering these questions?

Try using pictures and concrete objects to help you to work out the answer.



Challenge 4: Word problems!

Now use your knowledge on dividing by 3 to solve these division problems.

Remember to show your working!

Question 1:

1a. Share 33 cubes between 3 parts.

Complete:

There are 3 parts with..... cubes in each part.

$$33 \div 3 =$$

1b. Put 33 cubes into groups of 3.

Complete:

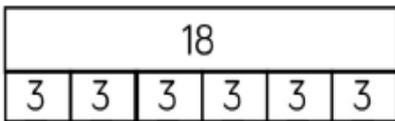
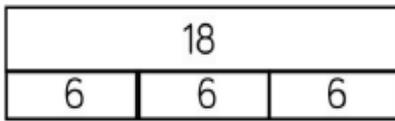
There are..... parts with 3 cubes in each part.

$$33 \div 3 =$$

What is the same about these questions? What is different?

Question 2

Jack has 18 seeds. He plans 3 seeds in each pot. Which bar model matches the problem?



Explain your answer.

Question 3

Start this rhythm:

Clap, clap, click, clap, clap, click.

Carry on the rhythm. What do you notice?

What will you be doing on the 15th beat?

How do you know?

What will you be doing on the 20th beat?

Explain your answer.



Challenge 4 answers:

Question 1:

Both questions use the same numbers. But the numbers are used differently. In the first question, the cubes are being shared. The 3 is the number of equal

parts. Whereas in the second question, the cubes are being grouped. The 3 shows the amount in each part. So there are 11 parts with 3 in each.

Question 2:

The second bar model matches the problem because Jack plants 3 seeds in each pot. Therefore, there will be 6 parts.

Question 3:

The clicks are multiples of 3. On the 15th beat, I will be clicking because it is a multiple of 3. On the 20th beat I will be clapping because it is not a multiple of 3.