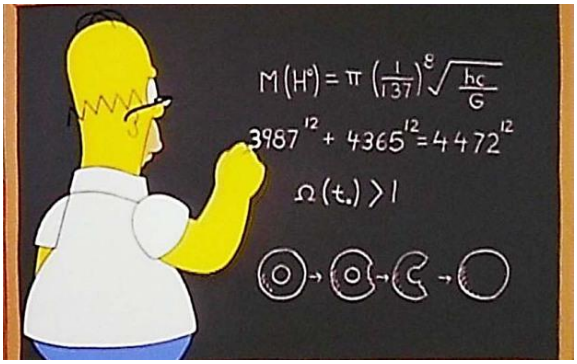
Day 1: An introduction to fractions of amounts

We've recently been learning about fractions and division in our home learning over the past couple of weeks. This is really going to help you with our brand-new topic, fractions of amounts.

Before we start let's recap and warm up our brains:

1. Order these fractions from smallest to largest. ½, 3/4, 1/3, 4/5, ¼.



2. Work out 36÷3 using the bus stop method.

Today we are going to learn how to find fractions of amounts. You might want to use images or physical objects to help you with your working out. When we work out fractions of amounts we are dividing the number by the **denominator** in our fraction. For example: If you need to find 1/2 of a number you divide the number by 2. If you want to find ¼ of a number you divide by 4.

Watch this video to find out more and have a go at working out the questions.

https://www.youtube.com/watch?v=9jbTfvJV_8s

Our knowledge of division will be very useful when we're finding fractions of amounts. But we are also going to look at another method using objects (including food!)

Activity 1:

Say I asked you to find ¼ of 12 smarties.

What would you do?

How would you work this out?

1. Start by sorting your 12 smarties into 4 piles because that's our denominator.

Helpful hint: Remember our **denominator** tells us how many parts/groups we need to sort the amount into. The **numerator** tells us how many groups we can take. In this case we only need 1 group.

2. Place the smarties one at a time and count to see how many you have in each pile. It should look something like this.

3 3 3 3

3. We can see there are 3 smarties in each pile but let's check our answers to make sure we have used all 12 smarties.

We know 3+3+3+3= 12

3x4= 12

12÷4= 3.

You can use your knowledge on addition, multiplication and division to help you!

4. So, there are 3 smarties in each pile we know that ¼ of 12= 3.

Activity 2:

This time were going to use pieces of chocolate! We are going to try to find 1/3 of 15 pieces of chocolate. Using what we already know how might you work out this problem.

Let's follow the same steps we used to sort our smarties.

1. We need to sort our pieces of chocolate into 3 piles this time because we need to find 1/3 of an amount.

2. Now let's place our pieces of chocolate into the piles, counting them one at a time. It should look something like this:

5

5

5

3. We can see there are 5 pieces of chocolate in each pile. So that means 1/3 of 15 is 5.

4. We can check this by doing 5+5+5 or 5x3 or 15÷3.

Activity 3: Question time!

Have a go at answering these questions. You could use your knowledge of division or you could sort the numbers into groups using dots or objects around you.

1. Find ¼ of 16
2. Find 1/3 of 9
3. Find 1/3 of 18
4. Find ¼ of 8
5. Find ¼ of 20
6. Find 1/5 of 25
7. Find 1/3 of 24
8. Find ¼ of 28
9. Find 1/5 of 30
10. Find 1/5 of 15
11. Find 1/6 of 18
12. Find ¼ of 32

Activity 4: Word problems! How do you know? Prove it!

1. Emma has 32 sweets. She gives 1/2 of them to her friend Sarah. How many sweets does Sarah have?

2. 48 children are in a dinner hall. 1/4 of them are having school dinners. How many are having school dinners?

3. 45 people went to see a film at the cinema. 1/5 of the people bought popcorn. How many people **did not** buy popcorn?

4. My dog has 18 puppies. 1/3 of the puppies are sold. How many puppies are sold?

5. Sam had 50p pocket money. He spent 1/5 of it on a comic. How much money does he have **left**?

Activity 3 answers:

1. 4
2. 3
3. 6
4. 2
5. 5
6. 5
7. 8
8. 7
9. 6
10. 3
11. 3
12. 8

Activity 4 answers:

1. Sarah has 16 sweets.
2. 12 children are having school dinners.
3. 1/5 of people did buy popcorn which is 9 people. So, 36 people didn't buy popcorn.
4. 6 of the puppies are sold.
5. Sam spent 10p on the comic. So, he has 40p left.