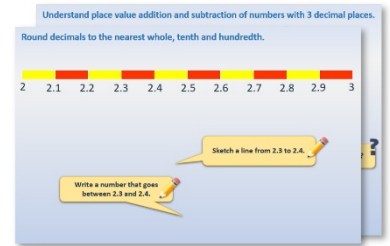


Week 10, Day 3

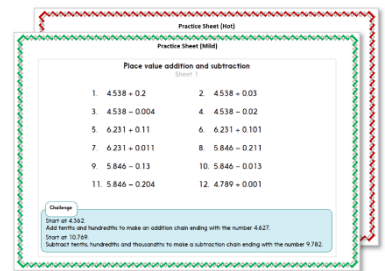
Find fractions of amounts (2)

Each day covers one maths topic. It should take you about 1 hour or just a little more.

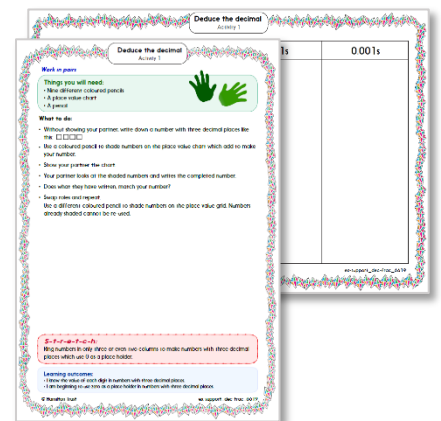
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**



4. Think you've cracked it? Whizzed through the Practice Sheets? Have a go at the **Investigation...**

Learning Reminders

Find fractions of amounts using sharing and number facts.

This recipe would make more cakes than we need.

We need to halve the amounts.

How can we work out half of 24?

Rice Crispies Cake Recipe

12 tablespoons butter

16 cups mini marshmallows

24 cups rice crispies

- Melt the butter and marshmallows in the microwave, this only usually takes about 30 seconds.
- Stir in the rice crispies.
- Squash down into a square tin and leave to set.

We can use number facts to halve 12.

6 spoons

Let's share 16 into two groups.

8 cups

Find fractions of amounts using sharing and number facts.

We can halve 24 using partitioning.

Half of 20 is 10.

20 + 4

Half of 4 is 2.

10 + 2 = **12**

So, half of 24 is **12**.

Learning Reminders

Find fractions of amounts using sharing and number facts.

To make a chewier version, we would need to use $\frac{1}{3}$ of the butter and $\frac{1}{3}$ of the Rice Crispies.

Ingredients Table

Ingredient	Whole amount	$\frac{1}{2}$ amount	$\frac{1}{3}$ amount	$\frac{1}{4}$ amount
Butter	12 tablespoons	6	4	
Mini marshmallows	16 cups	8		
Rice Crispies	24 cups	12	8	

So we need to split 12 into 3 to find $\frac{1}{3}$ of 12 and 24 into 3 to find $\frac{1}{3}$ of 24.

Learning Reminders

Find fractions of amounts using sharing and number facts.

We also need to create a recipe that is a quarter of the original size, in order to make bitesize portions.

We can find $\frac{1}{4}$ by halving and halving again.

For the butter we know that $\frac{1}{2}$ of 12 is 6... and half of 6 is 3.

Halve and halve again to find the numbers of cups of marshmallows and rice crispies.

Ingredients Table

Ingredient	Whole amount	$\frac{1}{2}$ amount	$\frac{1}{3}$ amount	$\frac{1}{4}$ amount
Butter	12 tablespoons	6	4	3
Mini marshmallows	16 cups	8		4
Rice Crispies	24 cups	12	8	6

Practice Sheet Mild

Chocolate cornflake cake recipe

This recipe would make too much for one family! Calculate how much of each ingredient would be needed to make $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$ of the amount.

12 tablespoons golden syrup

24 tablespoons of butter

48 squares of chocolate

36 cups cornflakes

- Melt the butter, syrup and chocolate in the microwave, this only usually takes about 30 seconds.
- Stir in the cornflakes.
- Spoon into cake cases and leave to set.

Ingredients Table

Ingredient	Whole amount	$\frac{1}{2}$ amount	$\frac{1}{3}$ amount	$\frac{1}{4}$ amount
Golden syrup	12 tablespoons			
Butter	24 tablespoons			
Chocolate	48 squares			
Cornflakes	36 cups			

Practice Sheet Hot

Finding $\frac{1}{2}$ $\frac{1}{4}$ $\frac{3}{4}$ $\frac{1}{3}$

Can you work out what $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, and $\frac{1}{3}$ of your strip number is?

Can you complete the table:

Full strip	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{3}$
12				
24				
36				
48				

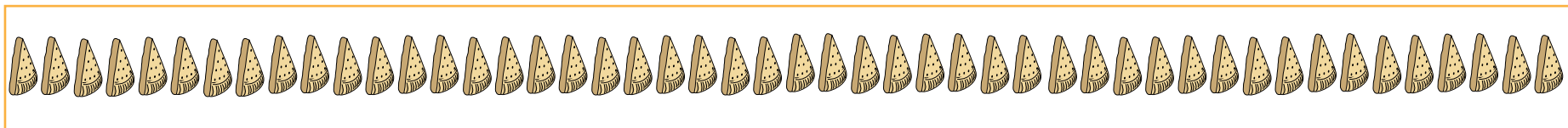
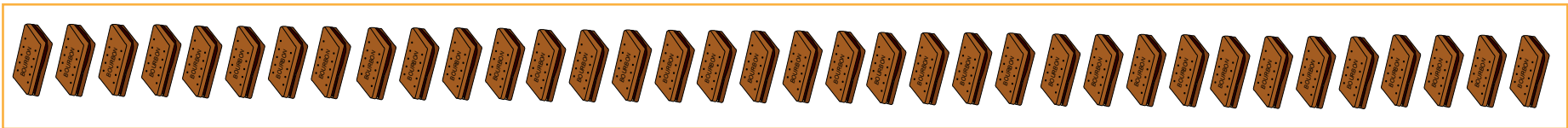
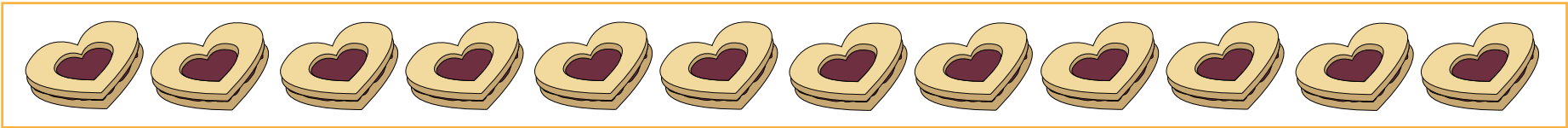
Challenge

If we want to find $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$, as we have here, there is a number bigger than 48 and less than 64 that works.

Can you explore what number that might be?

Practice Sheet Hot

Finding $\frac{1}{2}$ $\frac{1}{4}$ $\frac{3}{4}$ $\frac{1}{3}$



Practice Sheet Answers

Practice Sheet (Mild)

Golden syrup (12 tablespoons): $\frac{1}{2} = 6$, $\frac{1}{3} = 4$, $\frac{1}{4} = 3$

Butter (24 tablespoons): $\frac{1}{2} = 12$, $\frac{1}{3} = 8$, $\frac{1}{4} = 6$

Chocolate (48 squares): $\frac{1}{2} = 24$, $\frac{1}{4} = 12$

Cornflakes (36 cups): $\frac{1}{2} = 18$, $\frac{1}{3} = 12$, $\frac{1}{4} = 9$

Practice Sheet (Hot)

Full strip	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{3}$
12	6	3	9	4
24	12	6	18	8
36	18	9	27	12
48	24	12	36	16

Challenge

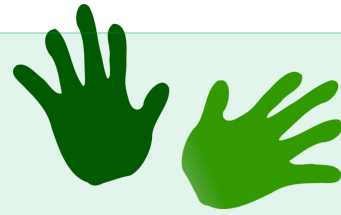
- a) Can you find the next two numbers after 48 that can be split into halves, quarters and thirds? **60, 72**
- b) What is the smallest number > 100 that can be split into halves, quarters and thirds? **108**

A Bit Stuck? Alien adventure

Work in pairs

Things you will need:

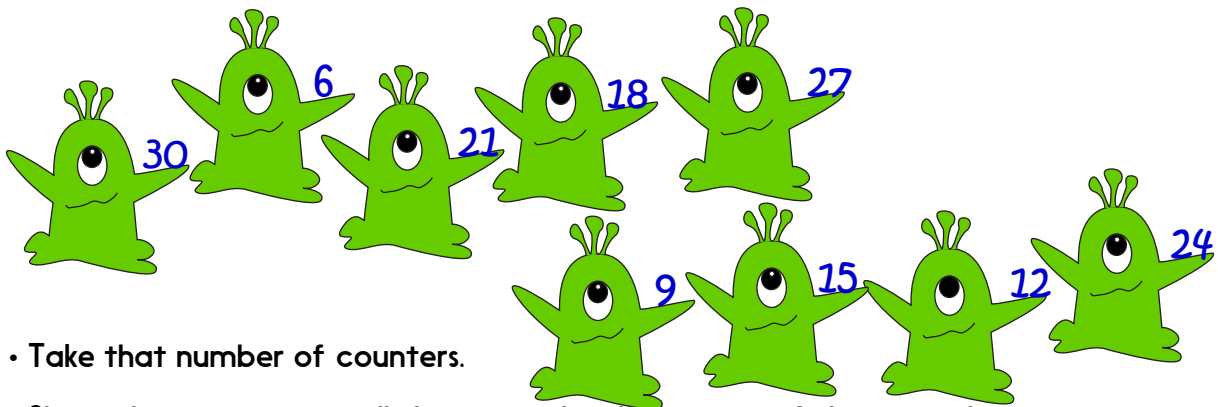
- An outline of a spaceship
- 30 counters/pennies
- A pencil



What to do:

- The aliens are going on an adventure!
- Each $\frac{1}{3}$ of the spaceship must have the same number of aliens. Otherwise the spaceship will become unstable.
- Choose an alien with a number.

$\frac{1}{3}$ of 12 is 4
$\frac{1}{3}$ of 18 is
...



- Take that number of counters.
- Share the counters equally between the three parts of the spaceship.
- Write the fraction sentence.
- Choose at least four other aliens with numbers to go on an adventure. Each time, work out how many aliens need to be in each $\frac{1}{3}$ of the spaceship.

S-t-r-e-t-c-h:

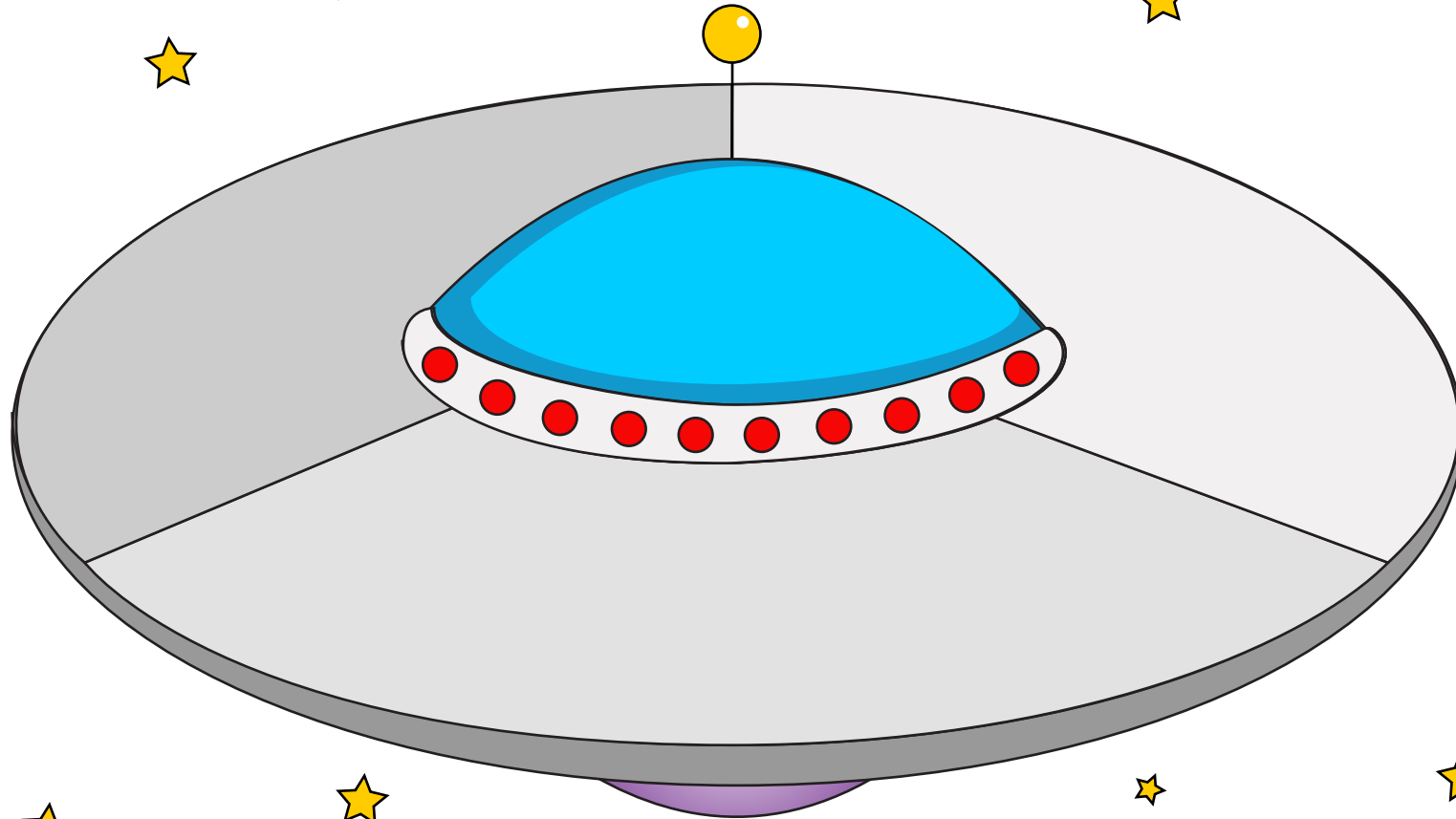
Find $\frac{1}{3}$ of 12, $\frac{2}{3}$ of 12 and $\frac{3}{3}$ of 12.

Find $\frac{1}{3}$, $\frac{2}{3}$ and $\frac{3}{3}$ of another number of aliens.

Learning outcomes:

- I can understand that thirds are equal parts of a whole.
- I can find $\frac{1}{3}$ of numbers (whole number answers)
- I am beginning to find $\frac{2}{3}$ of numbers (whole number answers).

A Bit Stuck?
Alien adventure



Investigation

Fraction clues

- Use your knowledge about finding fractions of numbers to solve this logic puzzle:

I am a whole number between 10 and 20.
If you halve me, your answer will not be a whole number.

If you find $\frac{1}{3}$ of me, your answer will be a number from the 5x table.

If you try to find $\frac{1}{4}$ of me, you may get a headache!

What number am I?

- Have a go at this one!

I am a very special number between 10 and 20.

I am special because if you find $\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{1}{4}$ of me, you will always get a whole number!

What am I?

Challenge

I am a whole number between 10 and 20.

If you halve me, the answer will be a whole number.

If you find $\frac{1}{4}$ of me, your answer will be an even number.

If you tried to find $\frac{1}{3}$ of me, you would get a headache!
BUT you could find $\frac{1}{3}$ of the number one less than me.

What number am I?