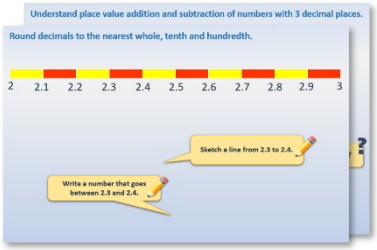
Week 10, Day 3

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.



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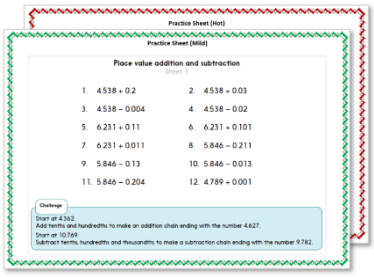
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.



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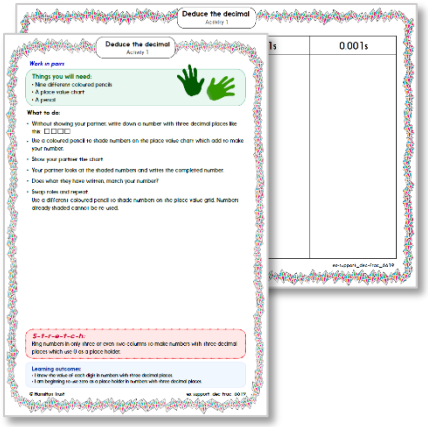
3. Finding it tricky? That's OK… have a go with a grown-up at **A Bit Stuck?**



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

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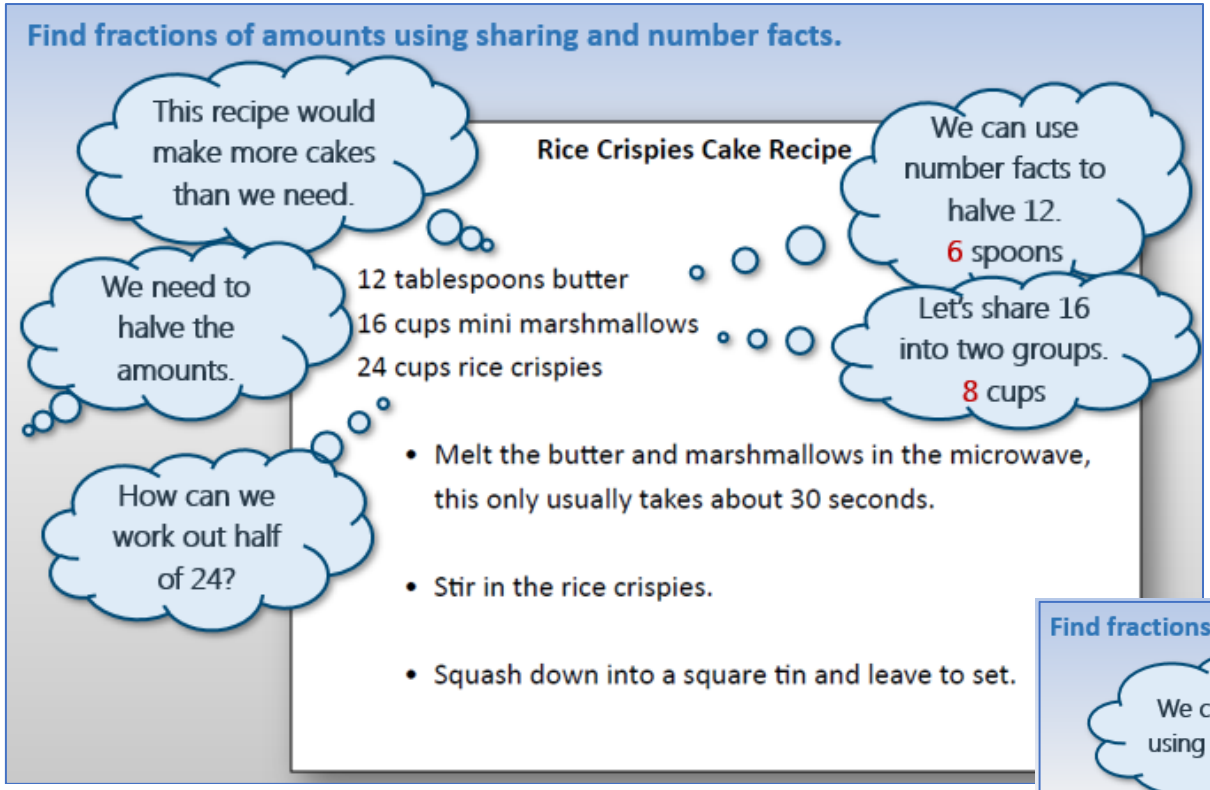
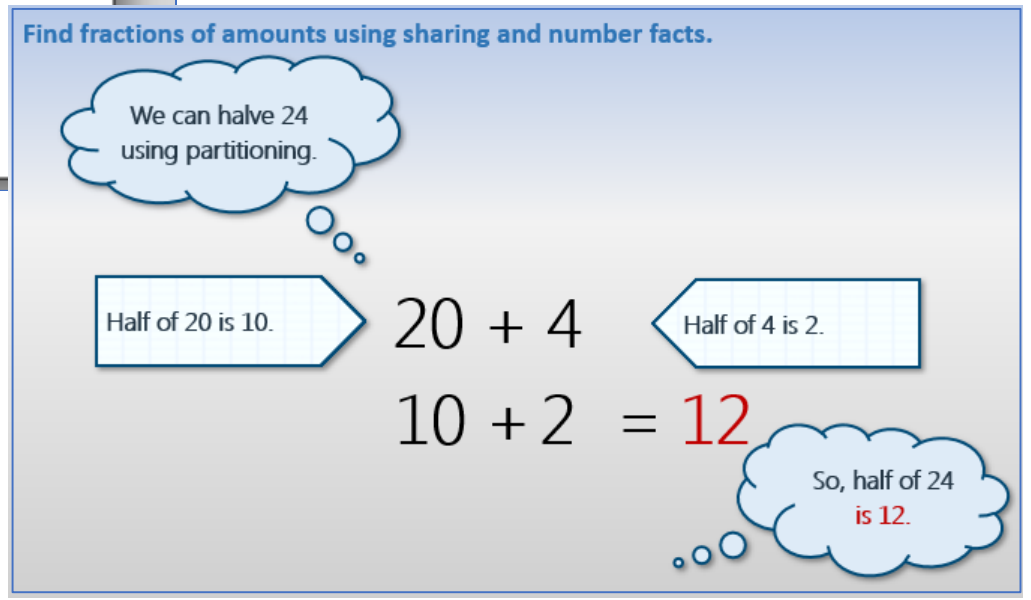
Learning Reminders





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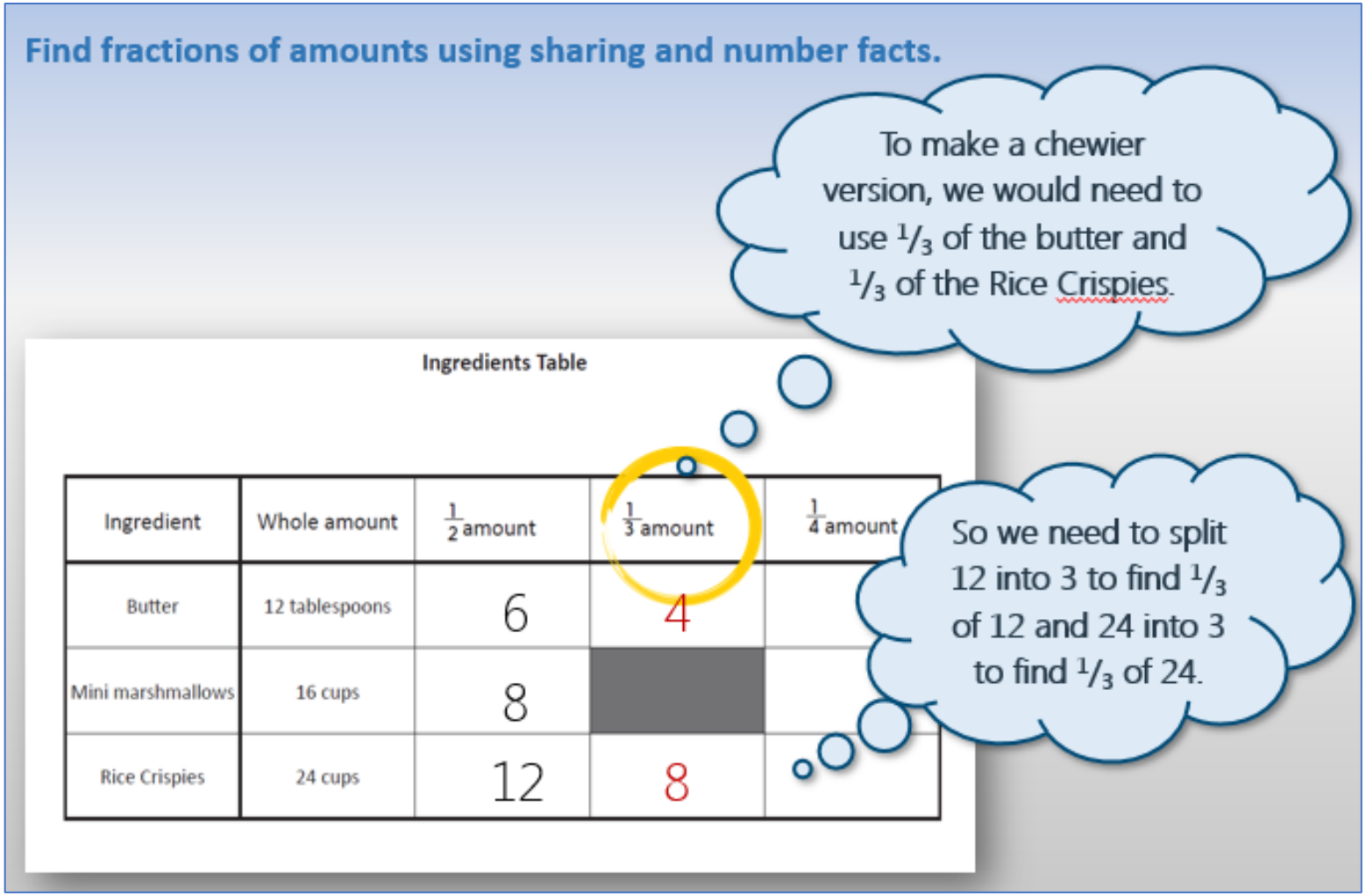
Learning Reminders



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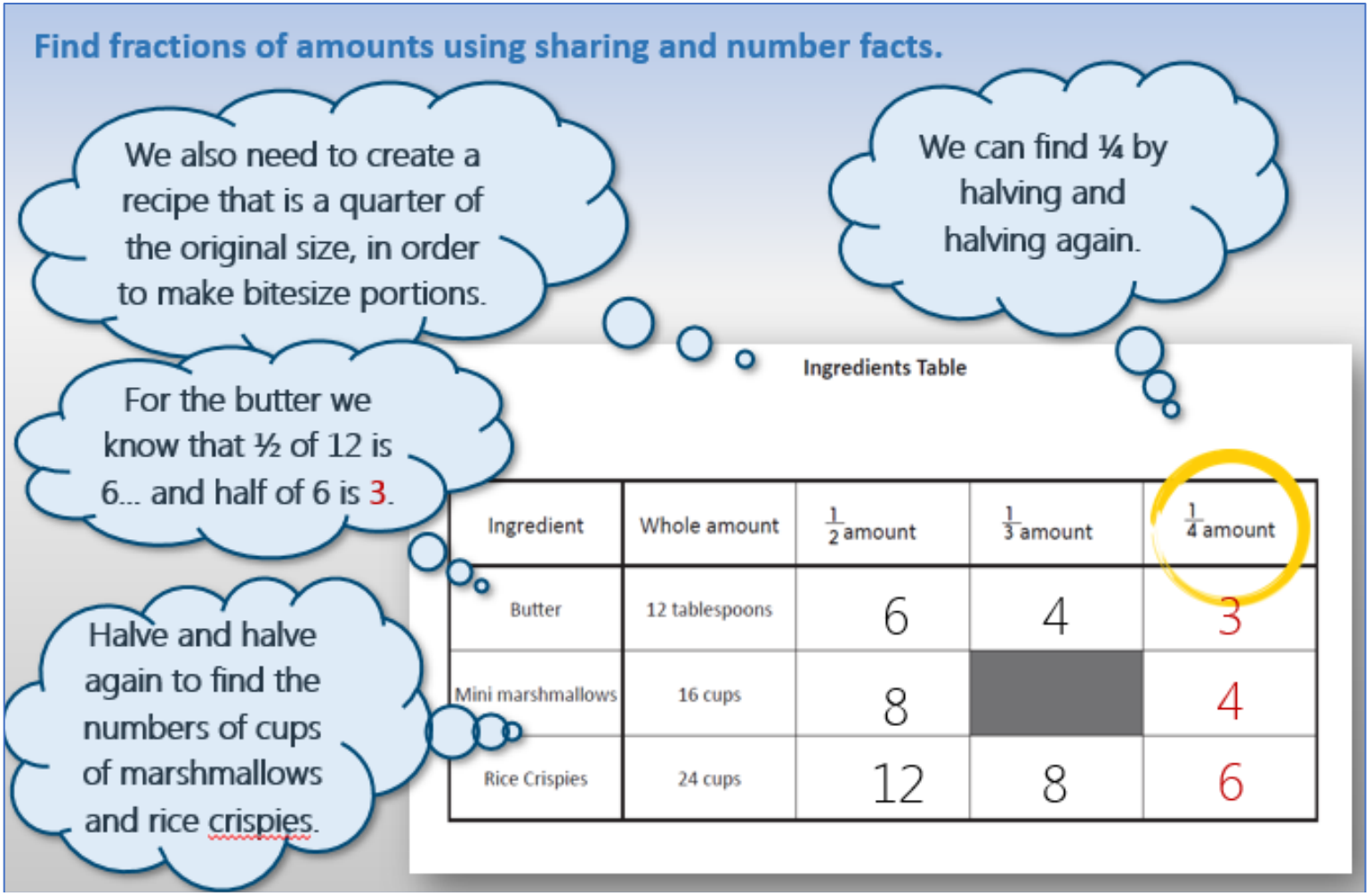
Learning Reminders



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

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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			

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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 that 64 that works.
Can you explore what number that might be?

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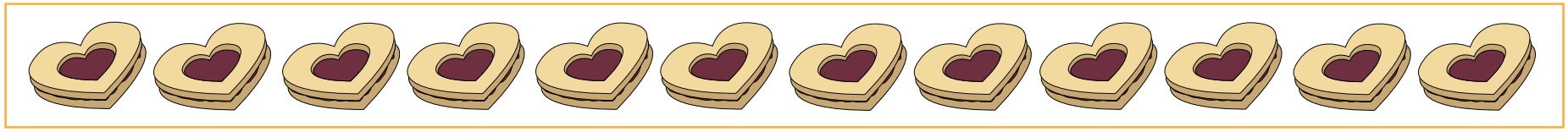
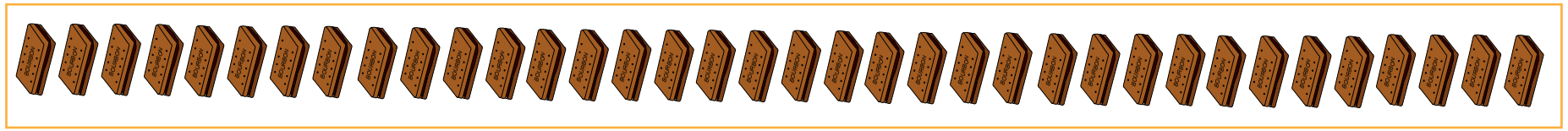
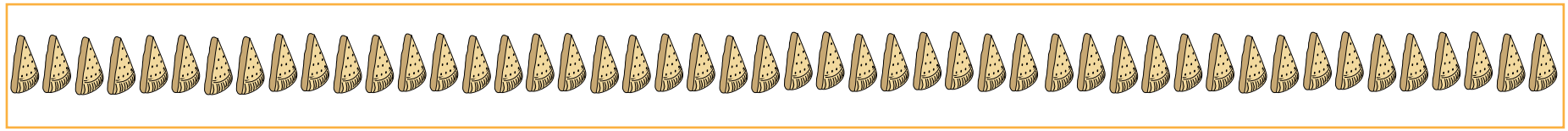
Practice Sheet Hot

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







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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

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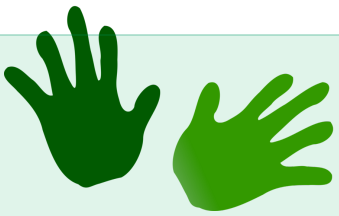
A Bit Stuck?
Alien adventure

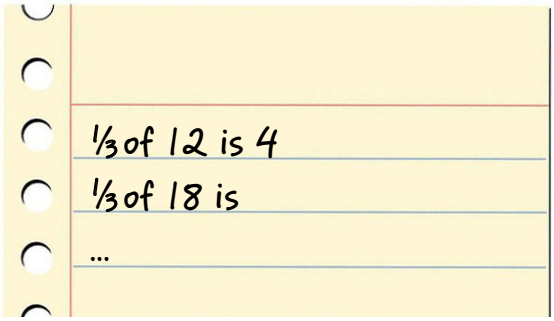
Work in pairs

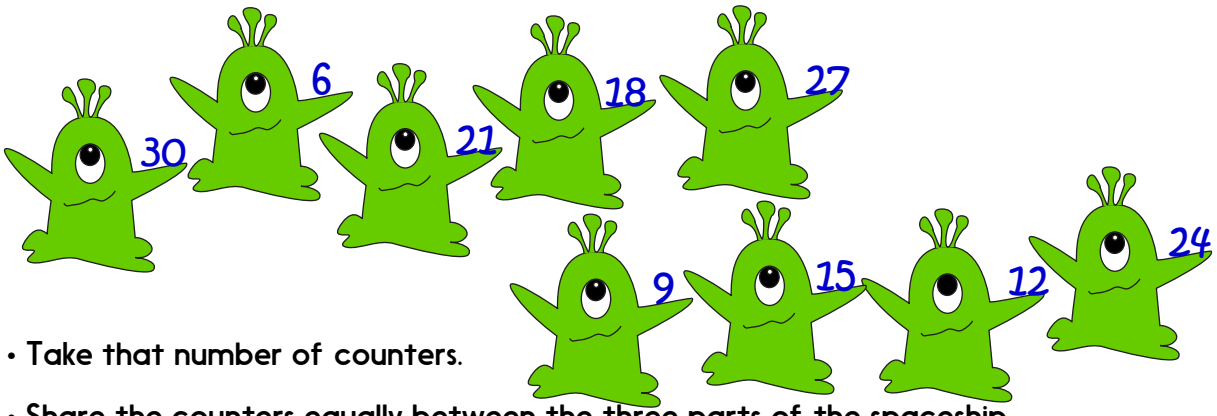
Things you will need:
- An outline of a spaceship
- 30 counters/pennies
- A pencil



What to do:

- The aliens are going on an adventure!
- Each ⅓ of the spaceship must have the same number of aliens. Otherwise the spaceship will become unstable.
- Choose an alien with a number.





- 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 ⅓ of the spaceship.

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

Find ⅓ of 12, ⅔ of 12 and ⅗ of 12.

Find ⅓, ⅔ and ⅗ of another number of aliens.

Learning outcomes:
- I can understand that thirds are equal parts of a whole.
- I can find ⅓ of numbers (whole number answers)
- I am beginning to find ⅔ of numbers (whole number answers).

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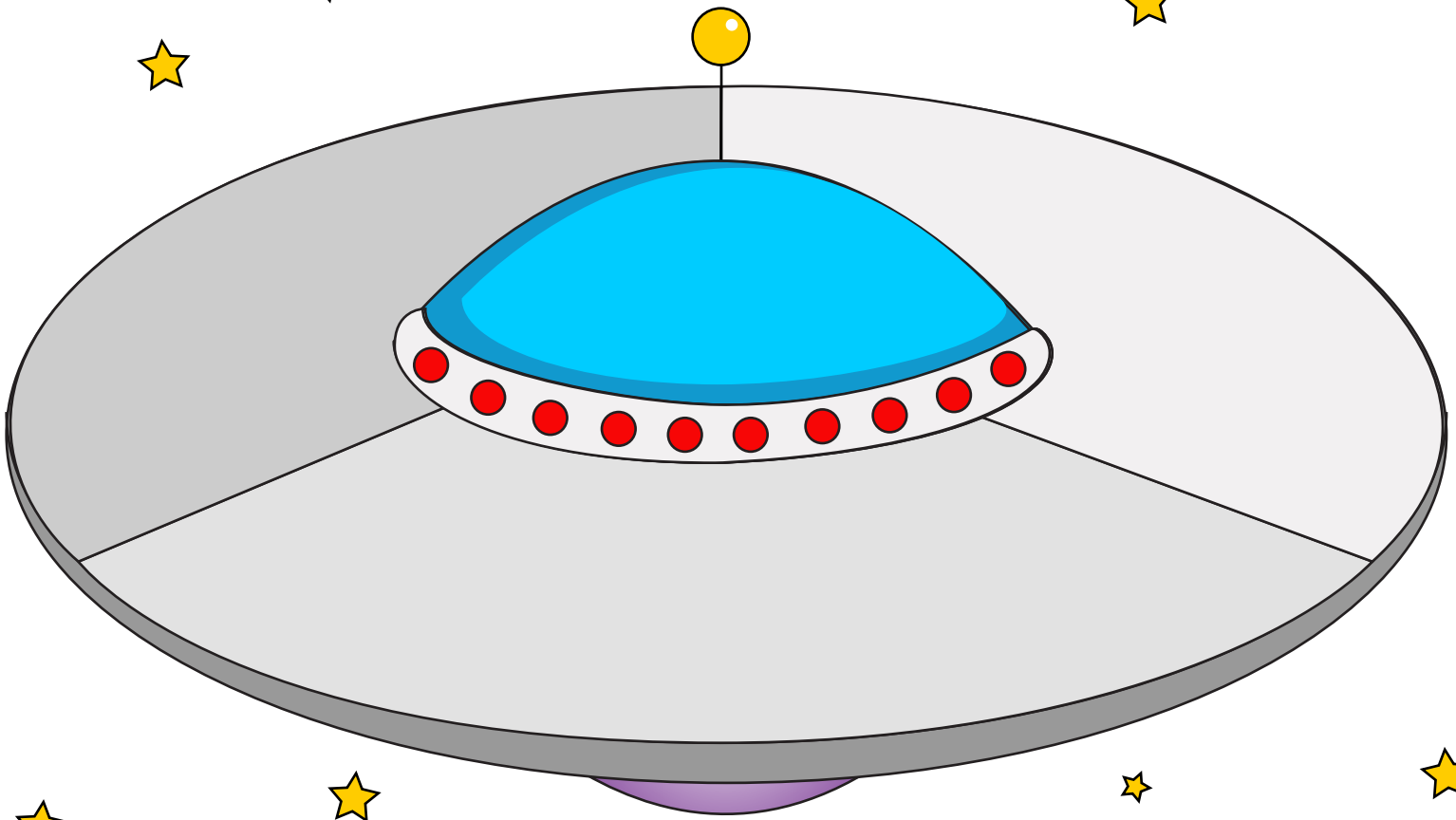
A Bit Stuck?
Alien adventure



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Investigation
Fraction clues

1. 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?

2. 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?

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