



Maths

Addition, Subtraction,
Multiplication and Division

Fun Factory

Aim

- I can identify common factors.

Success Criteria

- I know what 'common factor' means.
- I can identify common factors.

Multiple Splat



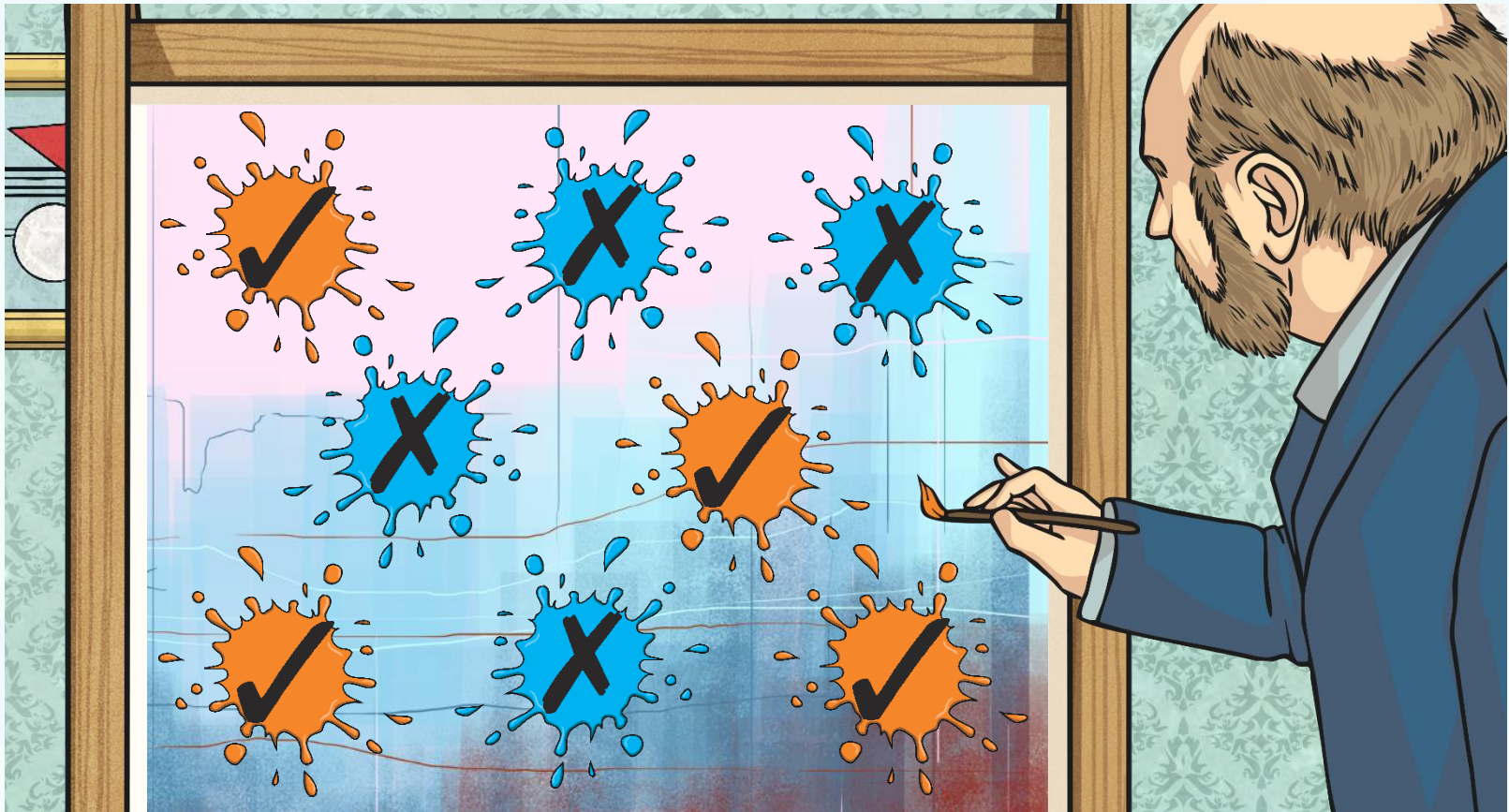
I am going to split the class into 2 groups and then select a person from each group.



Multiple Splat



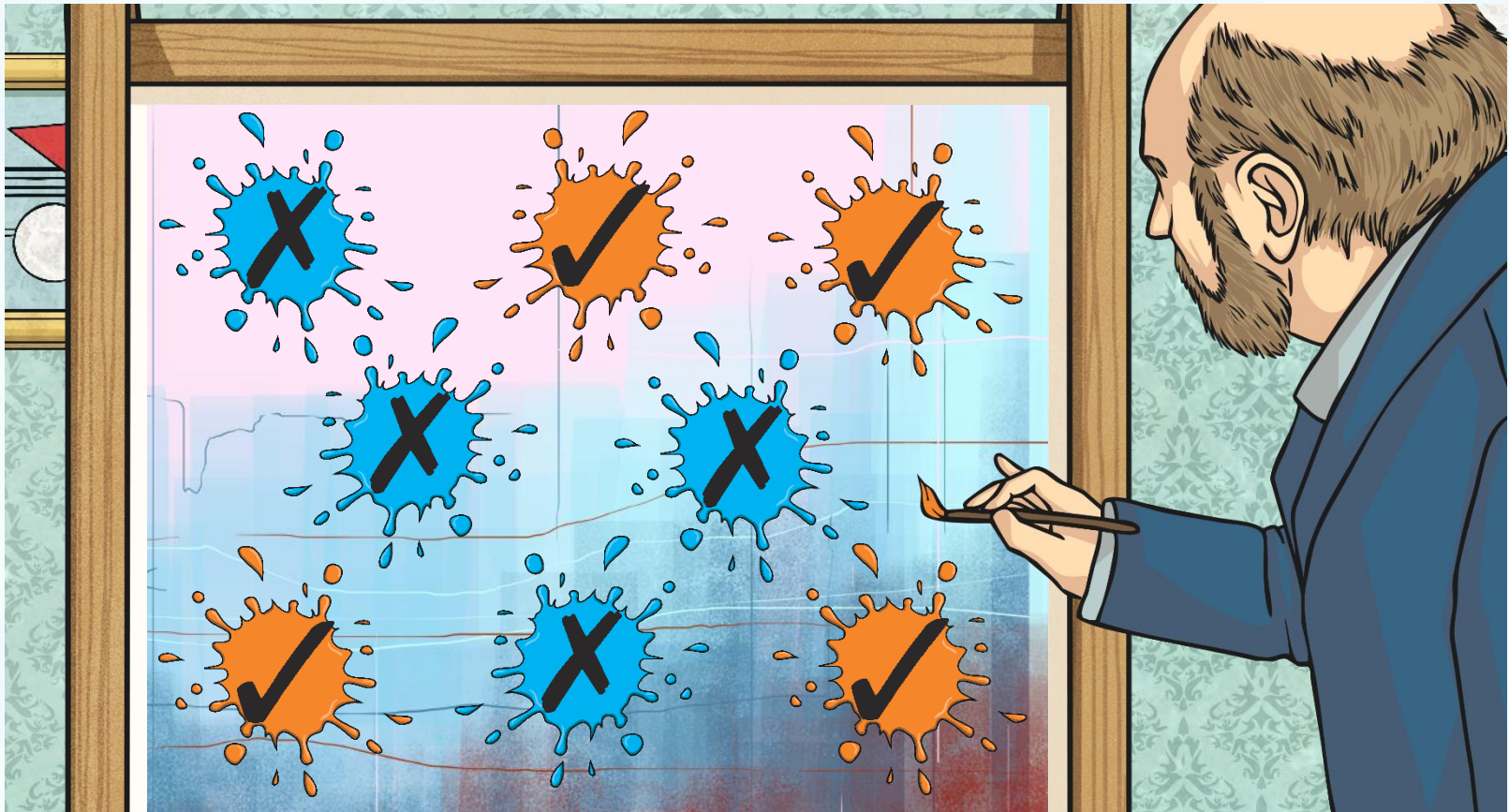
Click on the multiples of 12.



Multiple Splat



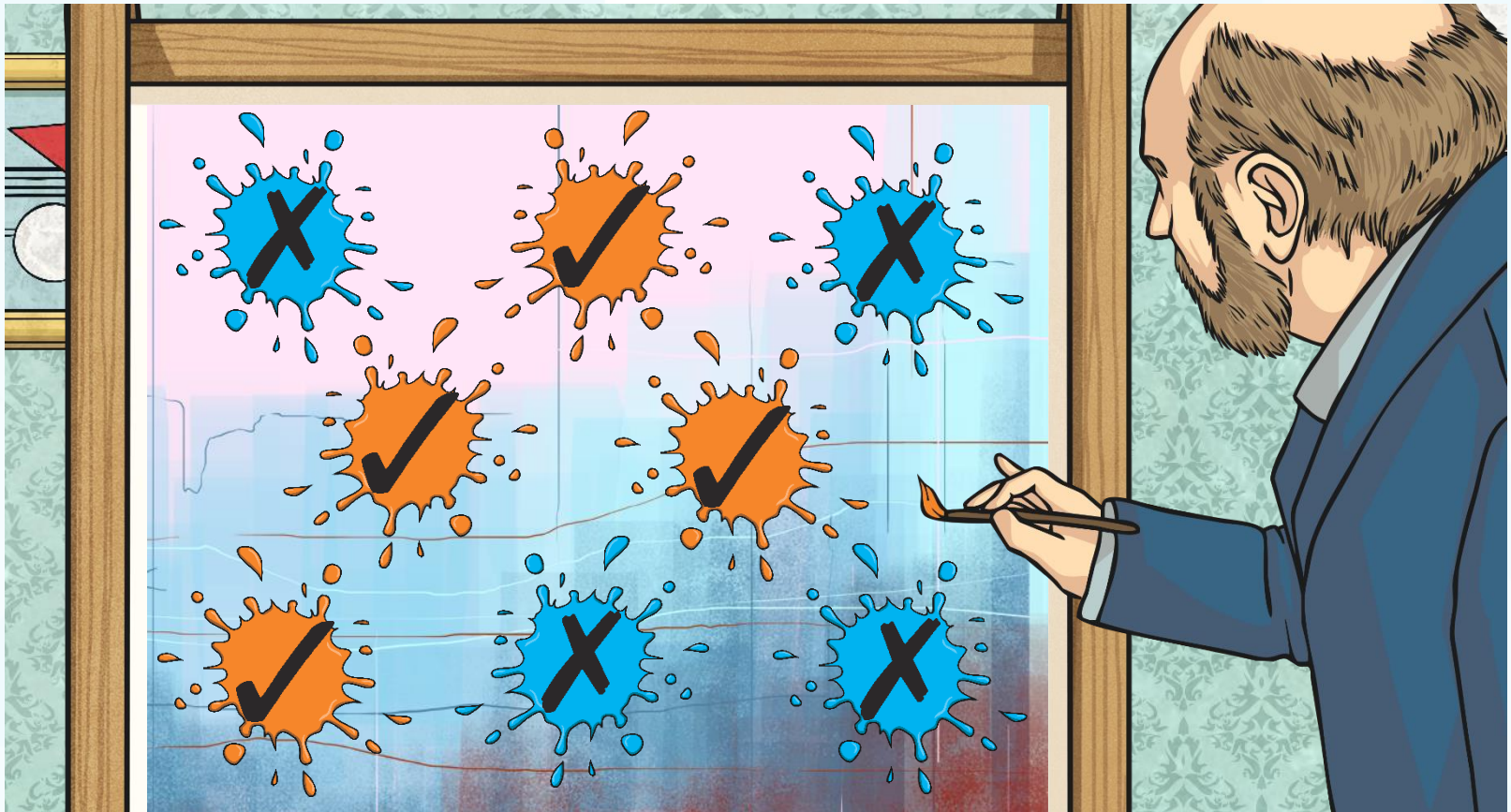
Click on the multiples of 7.



Multiple Splat



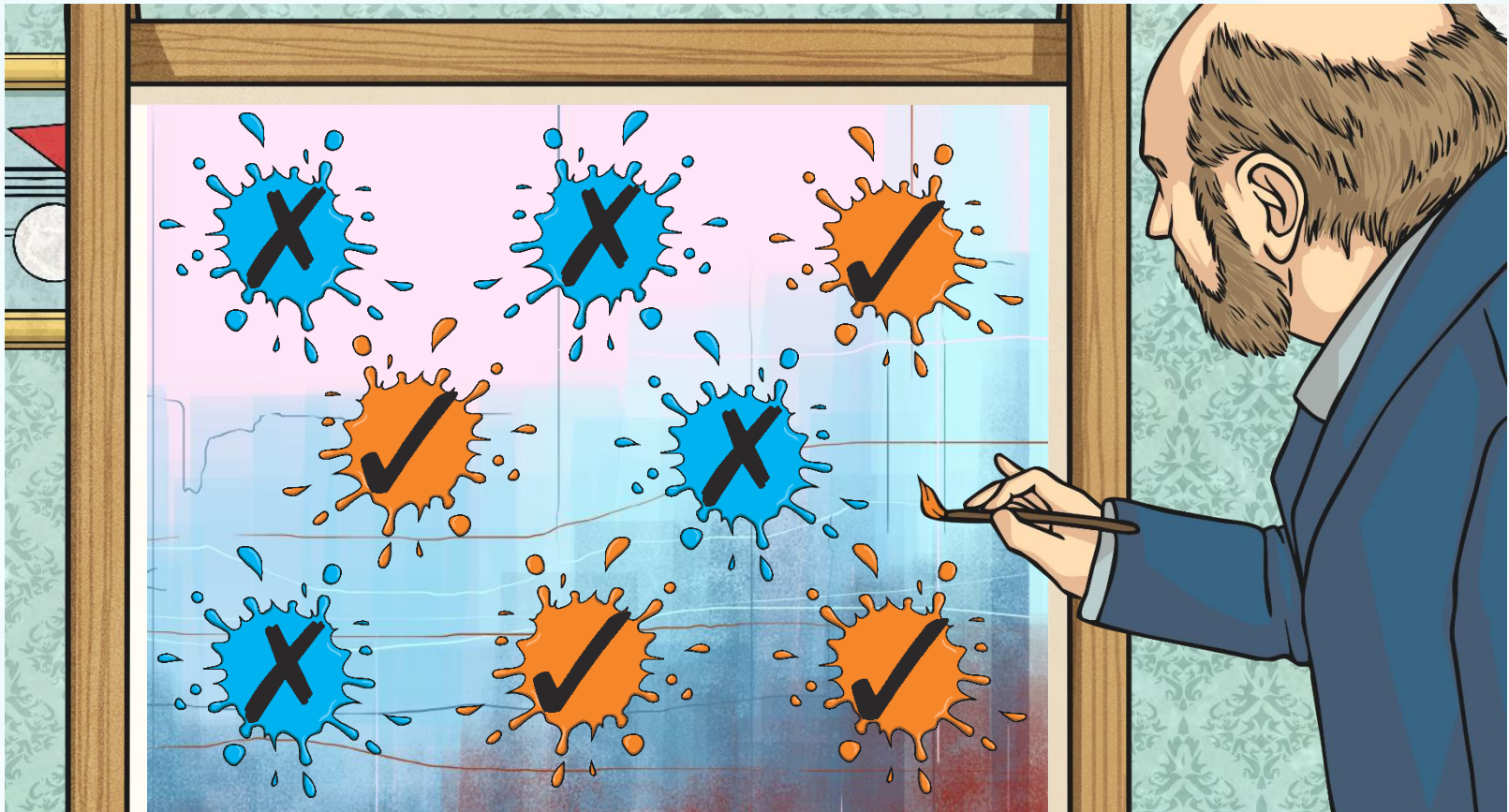
Click on the multiples of 4.



Multiple Splat



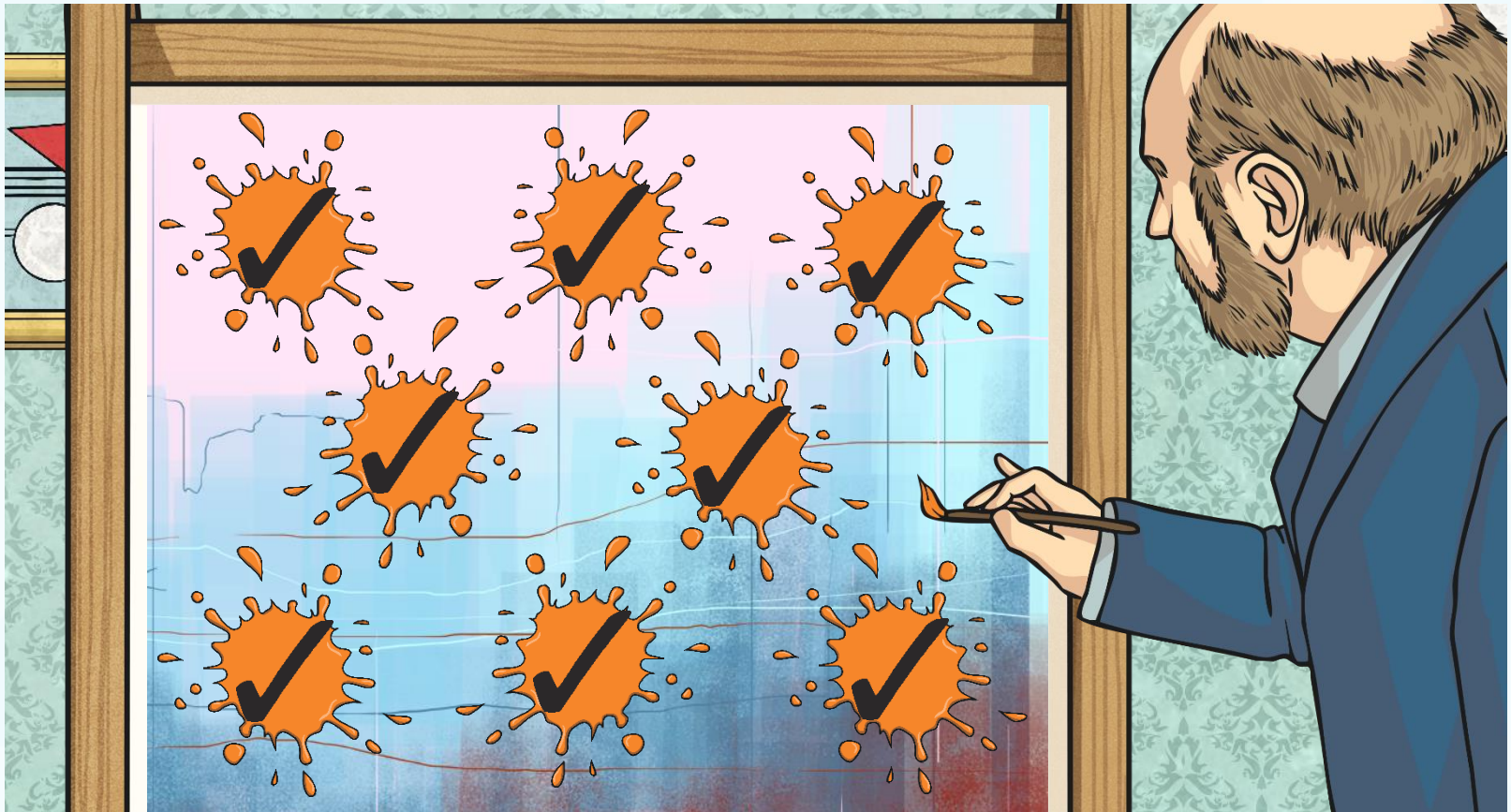
Click on the multiples of 15.



Multiple Splat

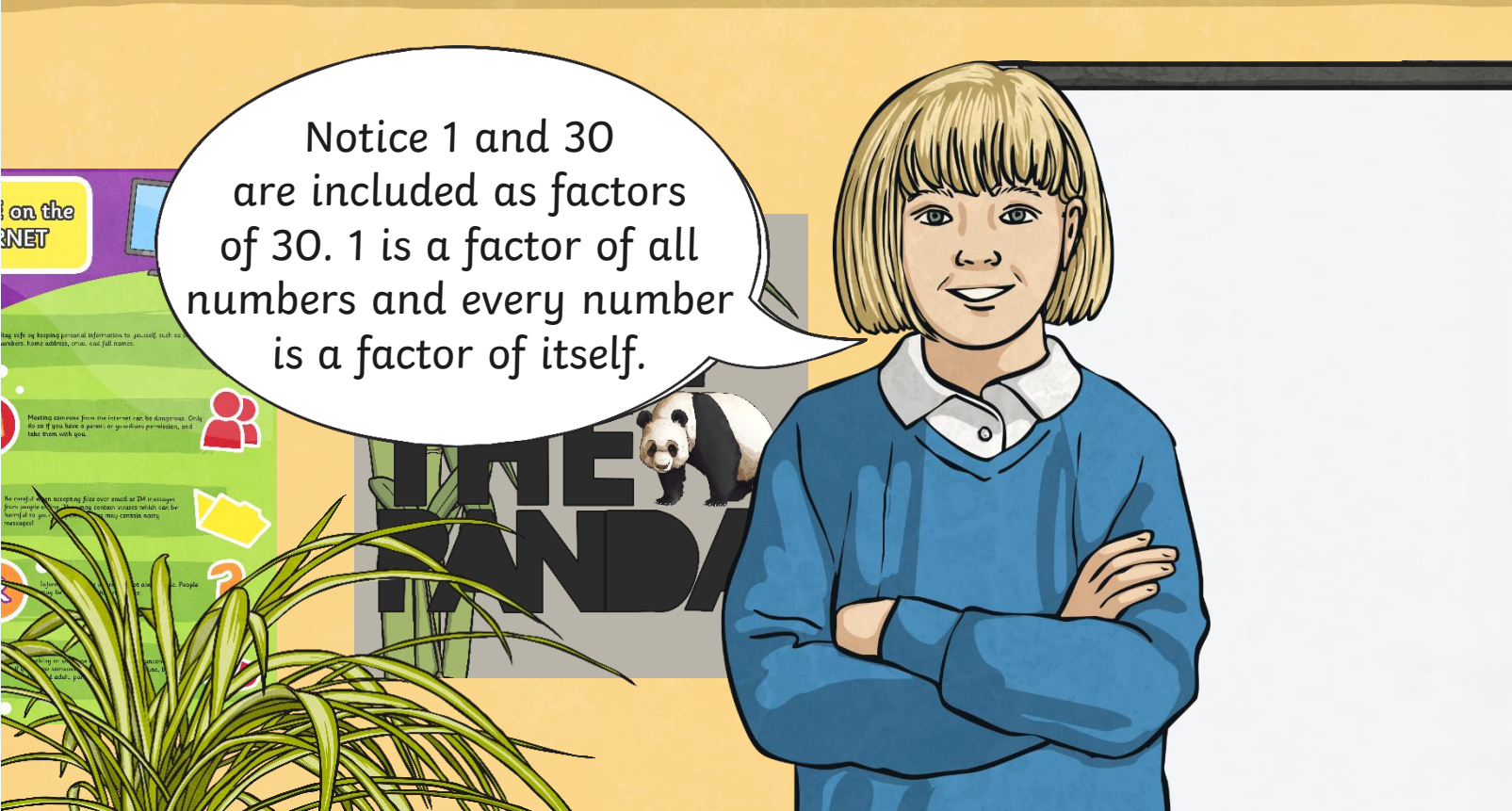


Click on the multiples of 2.



What Is a Factor?


A factor is a number by which another number can be divided exactly.



Notice 1 and 30 are included as factors of 30. 1 is a factor of all numbers and every number is a factor of itself.

What Is a Factor?

A factor is a number by which another number can be divided exactly

An illustration of a young woman with short blonde hair, wearing a white polo shirt, sitting at a desk in a classroom. She is looking down and writing on a piece of paper with a red pencil. A speech bubble is positioned to her left, containing text. The background shows a classroom setting with a bookshelf, a clock, and a computer monitor.

Find at least 5 factors of your chosen number using a calculator.

Number Factory



Everybody will need a Factor Card.



What Is a Common Factor?

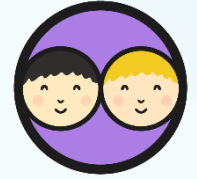
A common factor is a factor that is shared with more than one number.

The common factors of 15 and 30 are: 1, 3, 5 and 15.

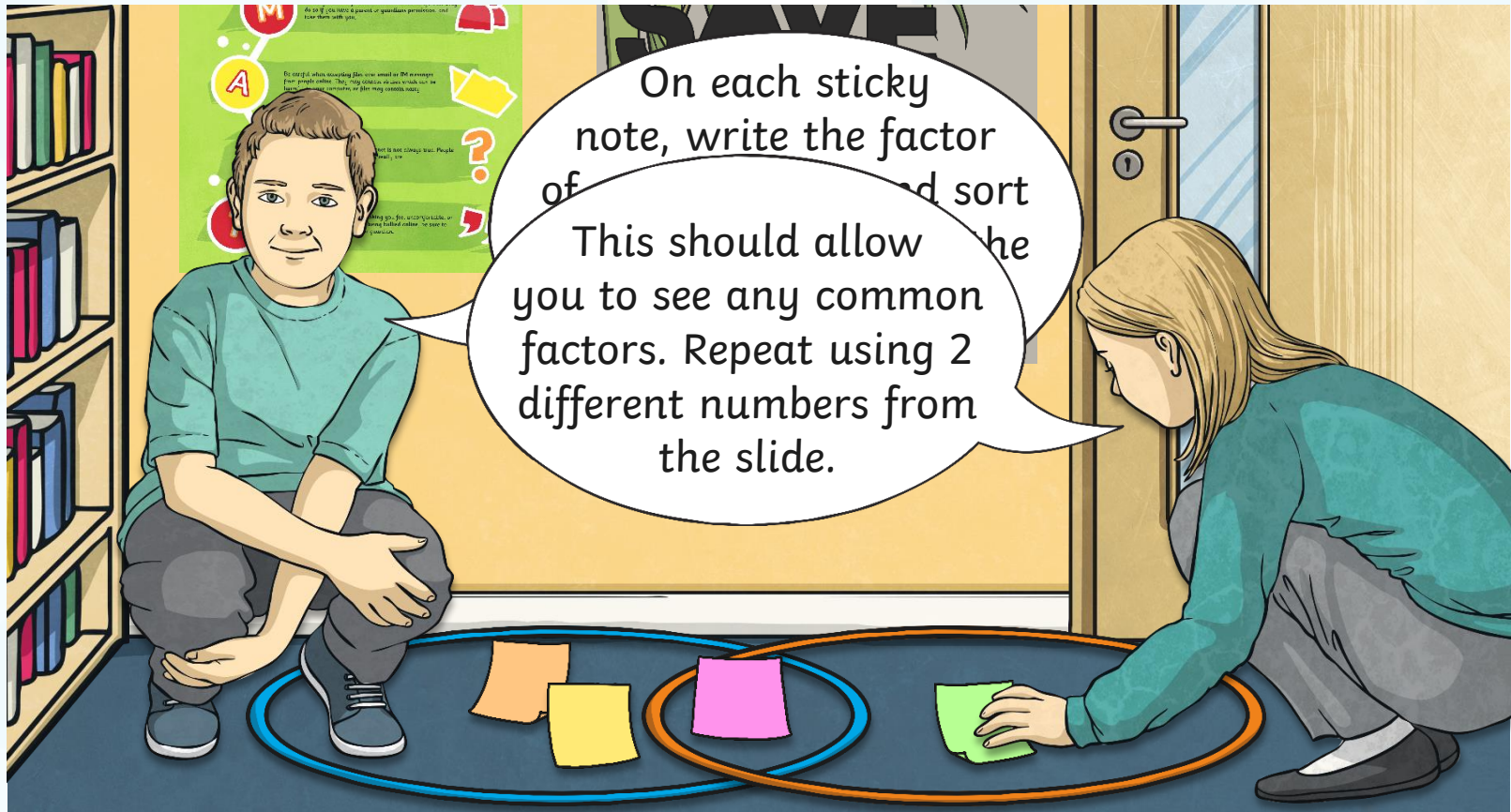
Factors of 15	Factors of 30
1, 3, 5, 15	1, 2, 3, 5, 6, 10, 15, 30

A smiley face is drawn on the whiteboard below the table.

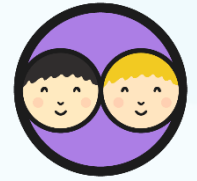
Finding Factors



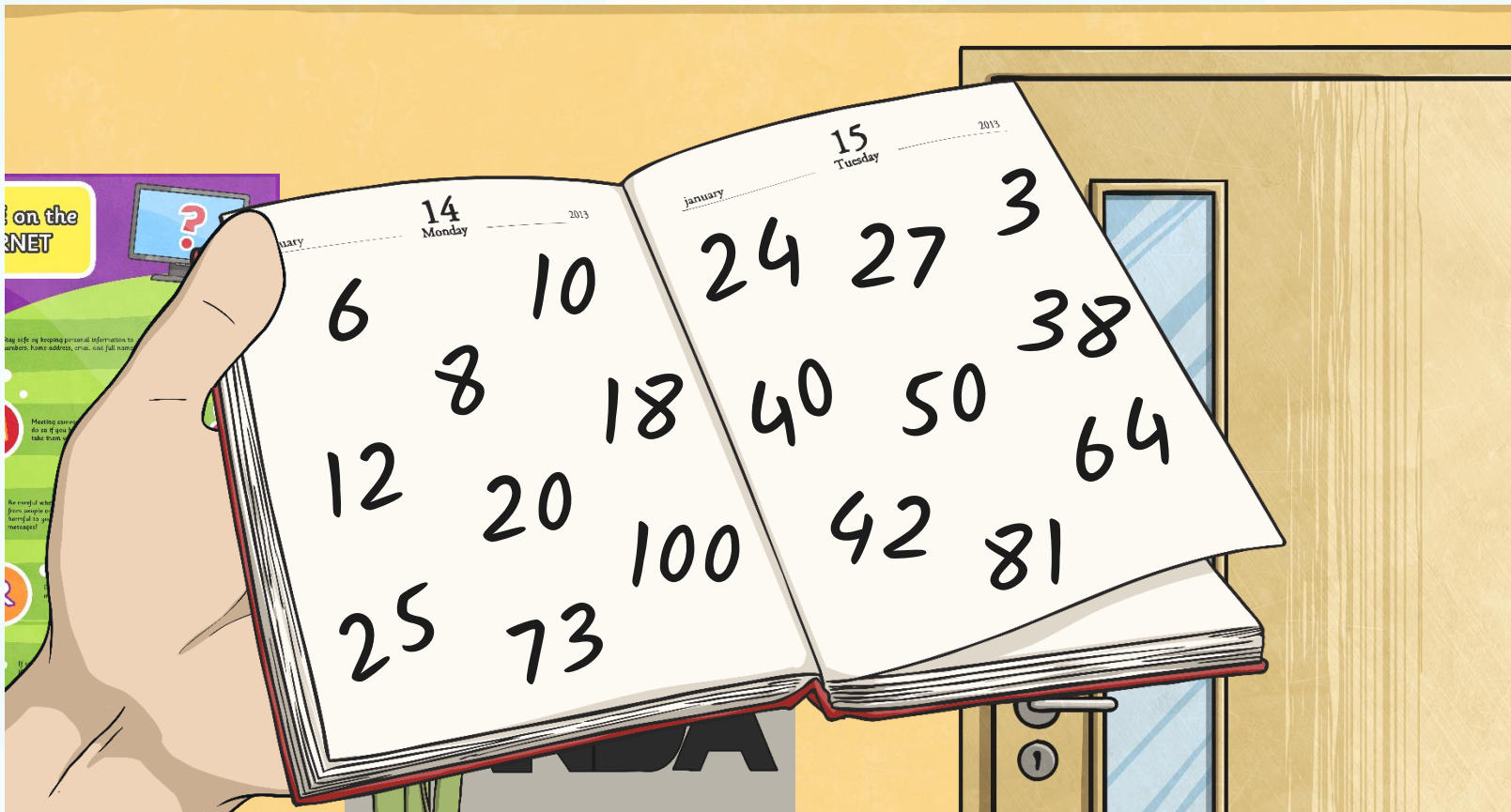
Select 2 numbers from the next slide.



Finding Factors

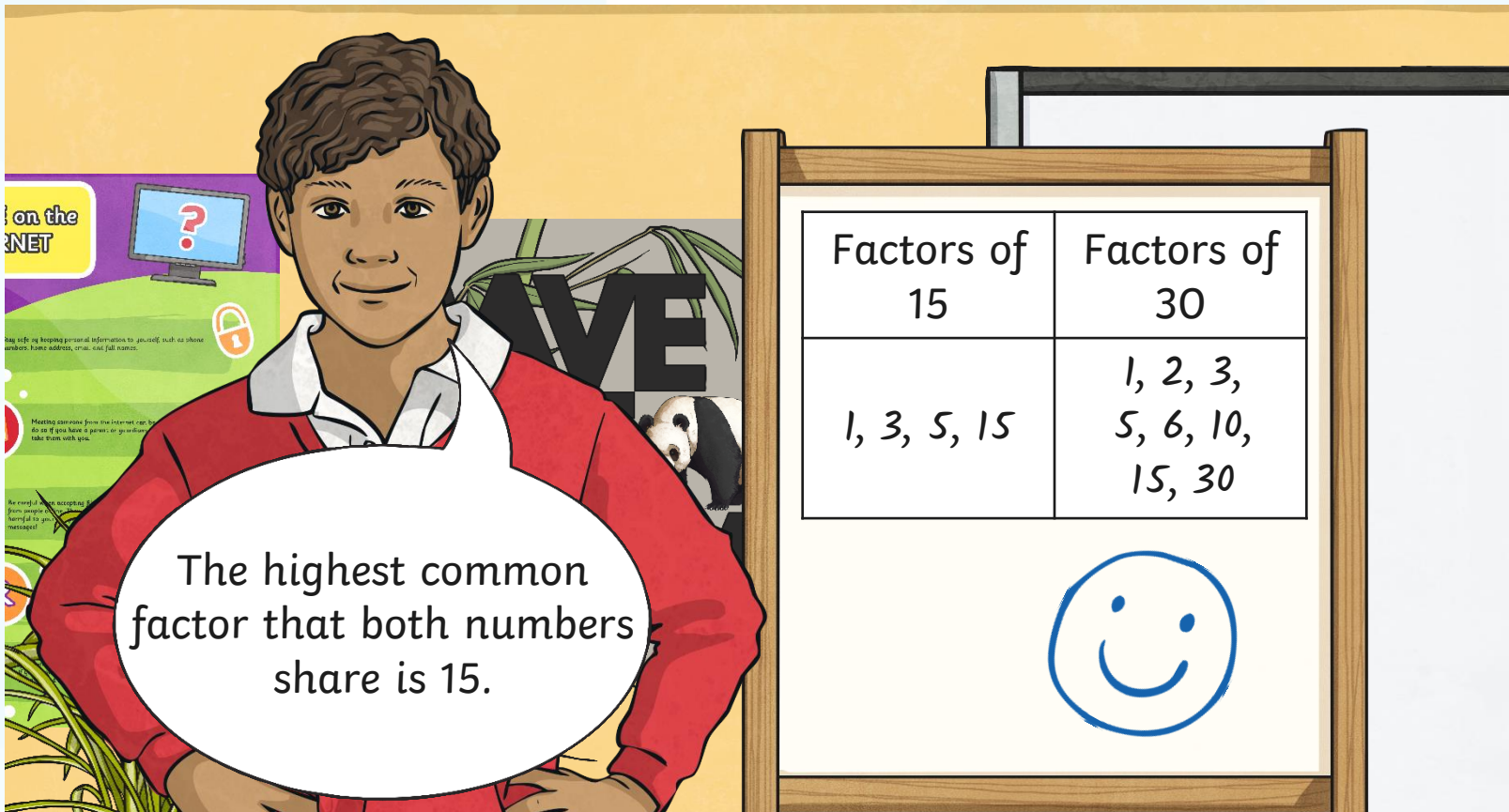


Select your numbers.




What Is the Highest Common Factor?

The highest common factor (HCF) is the largest common factor that is shared with more than one number.

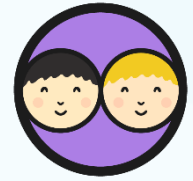


The highest common factor that both numbers share is 15.

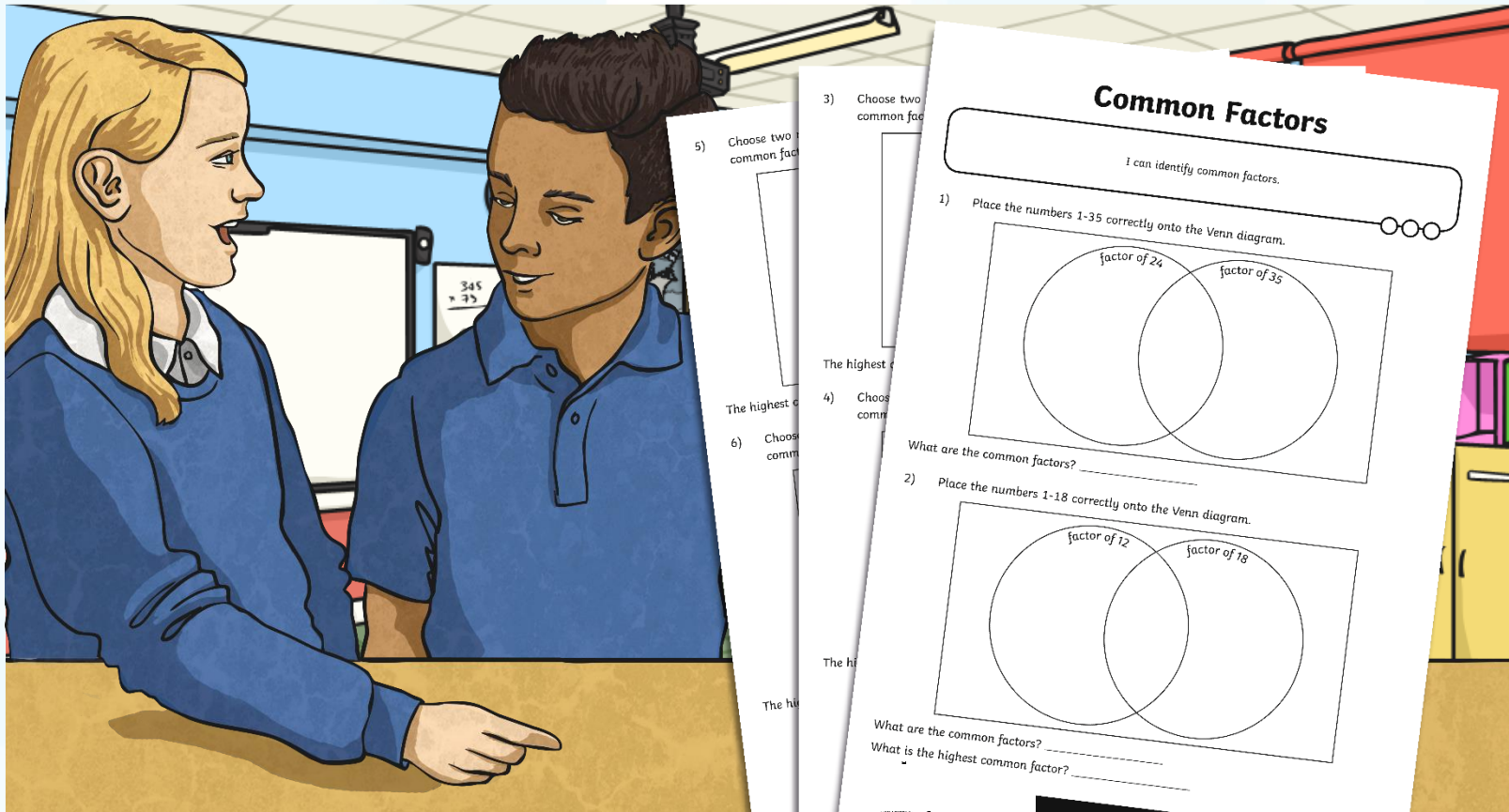
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Common Factors

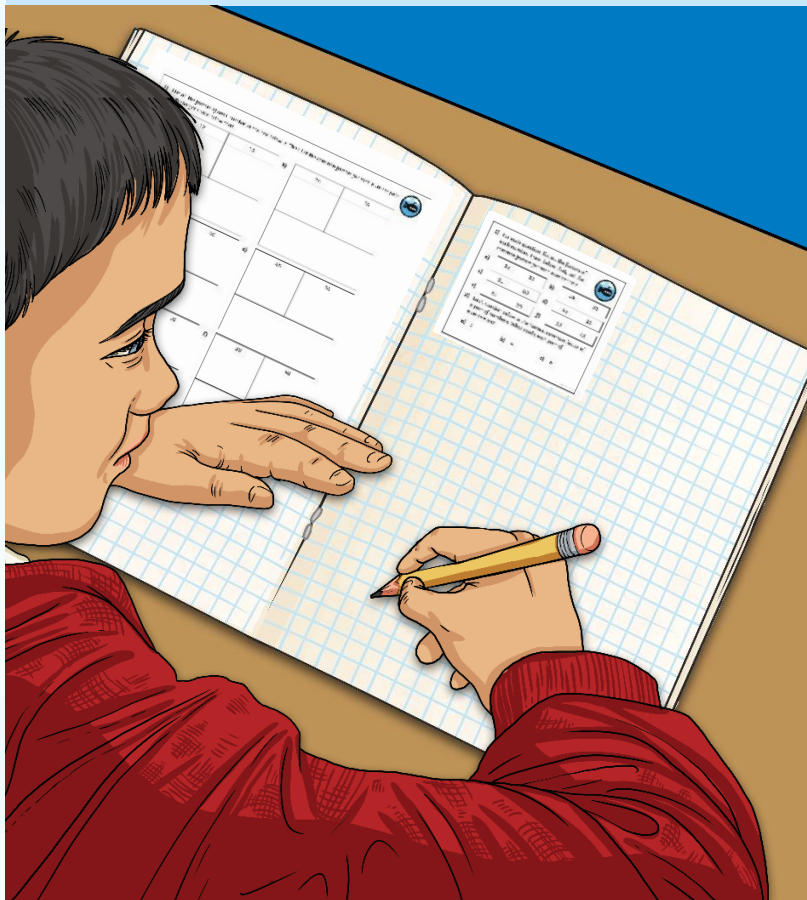


Use your marvellous maths skills to complete these activity sheets:



Diving into Mastery

Dive in by completing your own activity!



1) For each question, list all the factors of each number. Then, below that, list the common factors for each number pair.

a) 12	b) 15	c) 24	d) 36
e) 81	f) 60	g) 45	h) 16
i) 56	j) 20	k) 28	l) 48

2) Each number below is the highest common factor of a pair of numbers. What could each pair of numbers be?

a) 3 b) 4 c) 6

Look at these statements. Decide if each one is always, sometimes or never true. Explain your reasoning for each statement.

Always, sometimes, never?

- A number has an even number of factors.
- Pairs of even numbers have more common factors than pairs of odd numbers.
- A number has at least two factors.
- Some pairs of numbers have no common factors.

1) Stefan has two different packs of football cards. He has 64 red football cards and 48 green football cards. He wants to put them into an album with some pages of red cards and some pages of green cards. He wants to have the same number of cards on each page of the album. He asks his friends for some help.

Libby	Each page should have 6 cards on it.	Aaron	Each page should have 8 cards on it.
-------	--------------------------------------	-------	--------------------------------------

Who do you agree with? Explain your answer.

2) Pawel is working on a craft project. He has two pieces of ribbon. One is 180cm long and the other is 240cm long. He needs to cut the ribbons into equal pieces. He doesn't want to waste any ribbon by having any left over.

- Can you find all the different possible lengths of ribbon he could cut?
- Can you explain why he would not be able to cut the ribbons into lengths of 60cm?

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What Am I?



In pairs, think of two numbers and then write their highest common factor (HCF) and their lowest common multiple (LCM) on a whiteboard.



Aim



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Success Criteria

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