Mathematics

Number and Algebra

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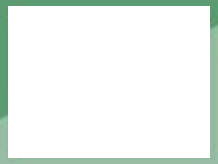
Paperclip Chains



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Aim

- To multiply and divide numbers by 10, 100 and 1000 to convert units of measurement.

Success Criteria

- I can multiply and divide numbers by 10, 100 and 1000 by moving each digit one, two or three places to the left or right.
- I can multiply and divide numbers by 10, 100 and 1000 to convert between mm, cm and m.

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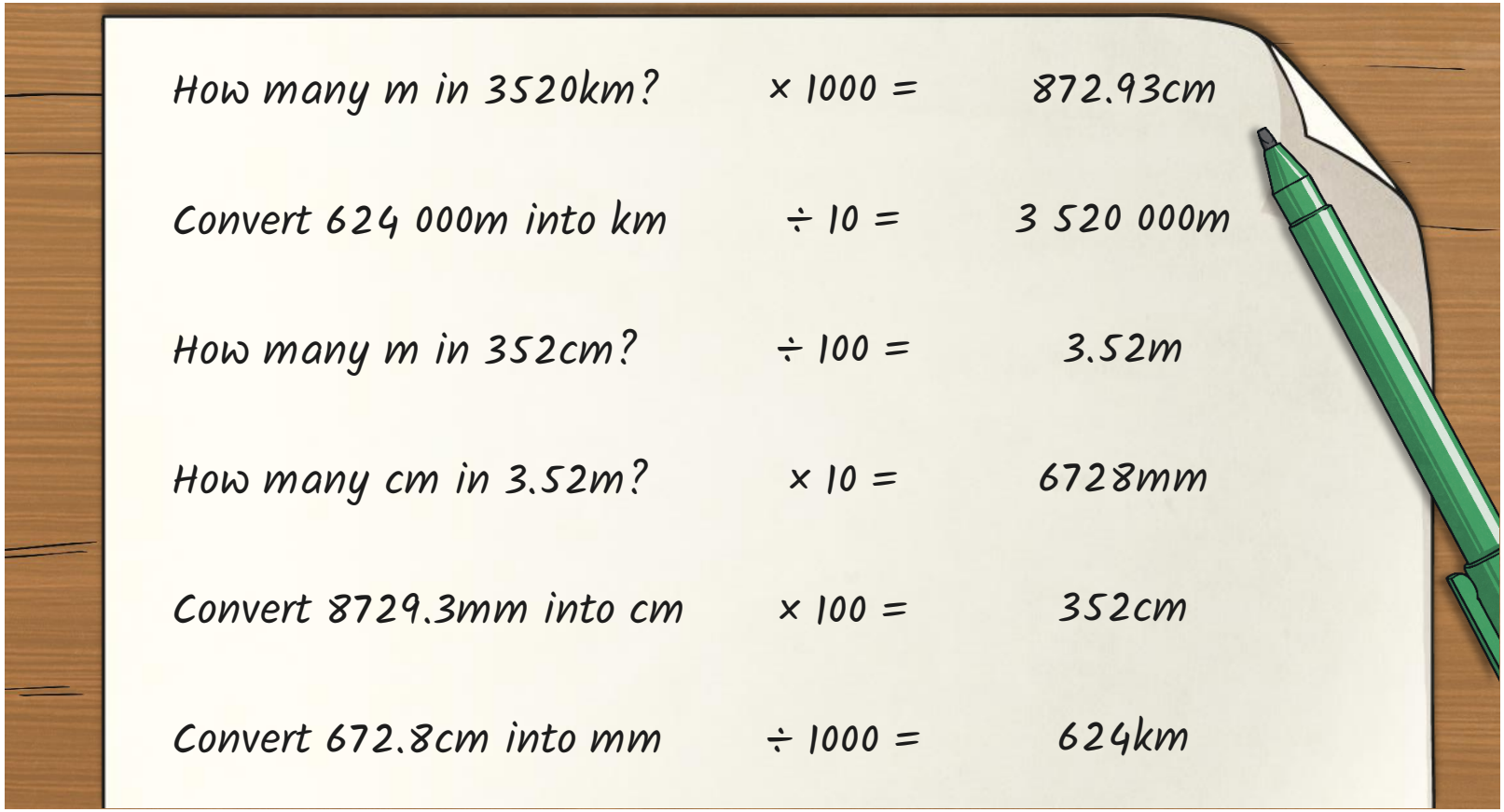
Trios

Match up the problem, the calculation and the answer.
Use a whiteboard to help.



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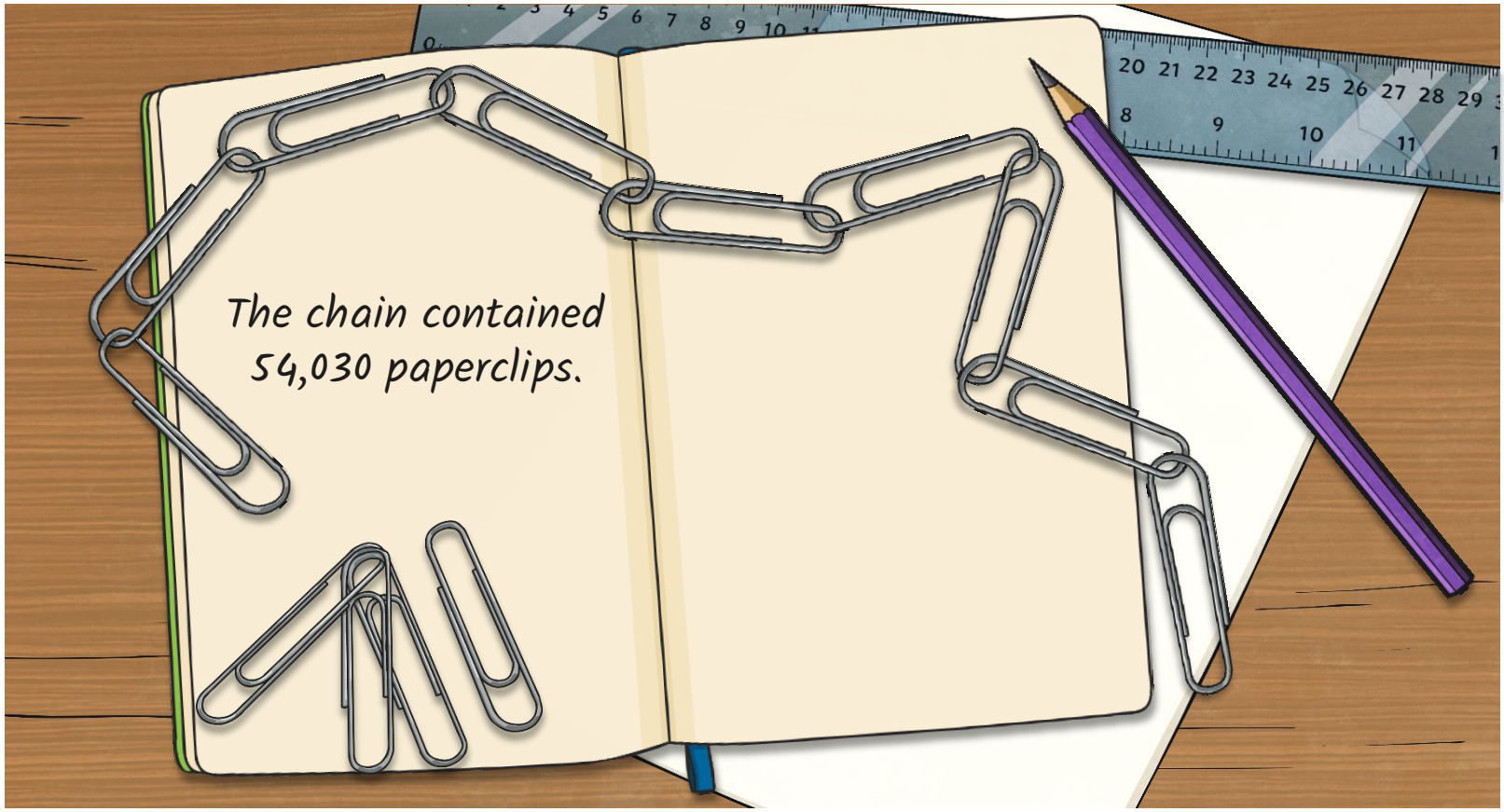
Paperclip Record

The world record for the longest paperclip chain made in 24 hours by one individual is 1627.6m.



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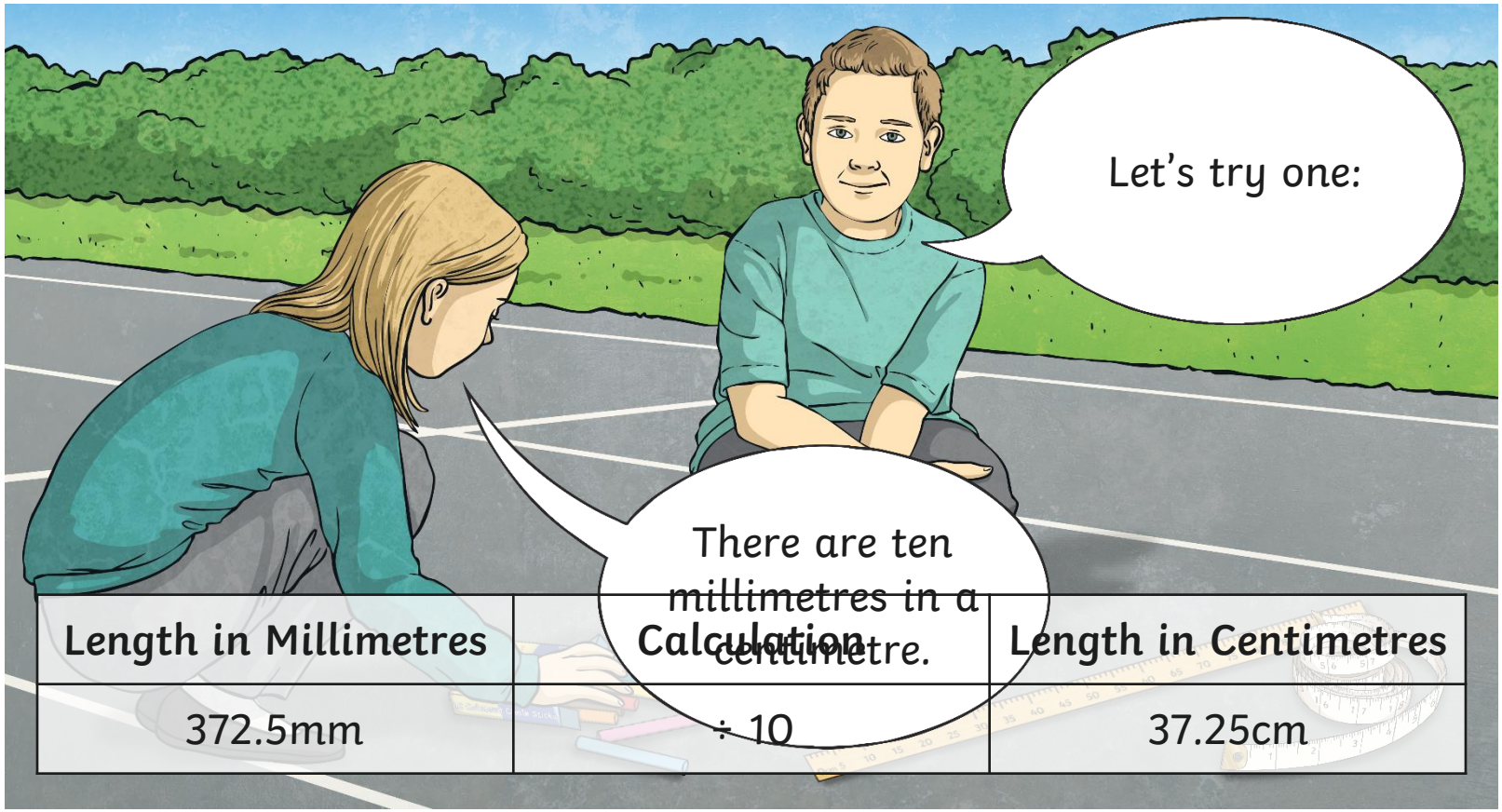
Converting Lengths

The length of the paperclip chain below is given in **millimetres**.
How could we convert this into **centimetres**?



Length in Millimetres	Calculation	Length in Centimetres
372.5mm	÷ 10	37.25cm

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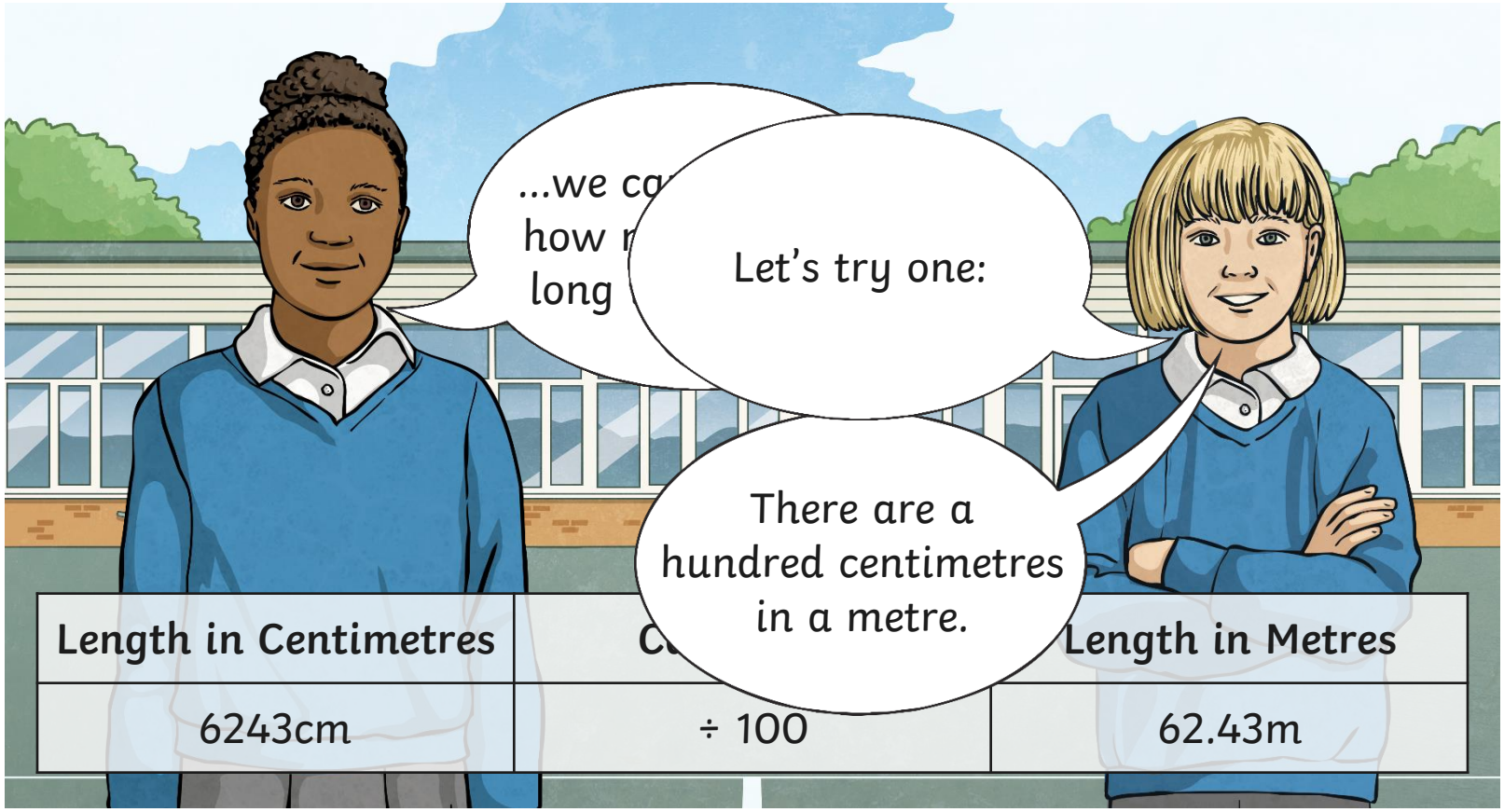
Converting Lengths

The length of this paperclip chain is given in **centimetres**.
How could we convert this into **metres**?



Length in Centimetres	C	Length in Metres
6243cm	÷ 100	62.43m

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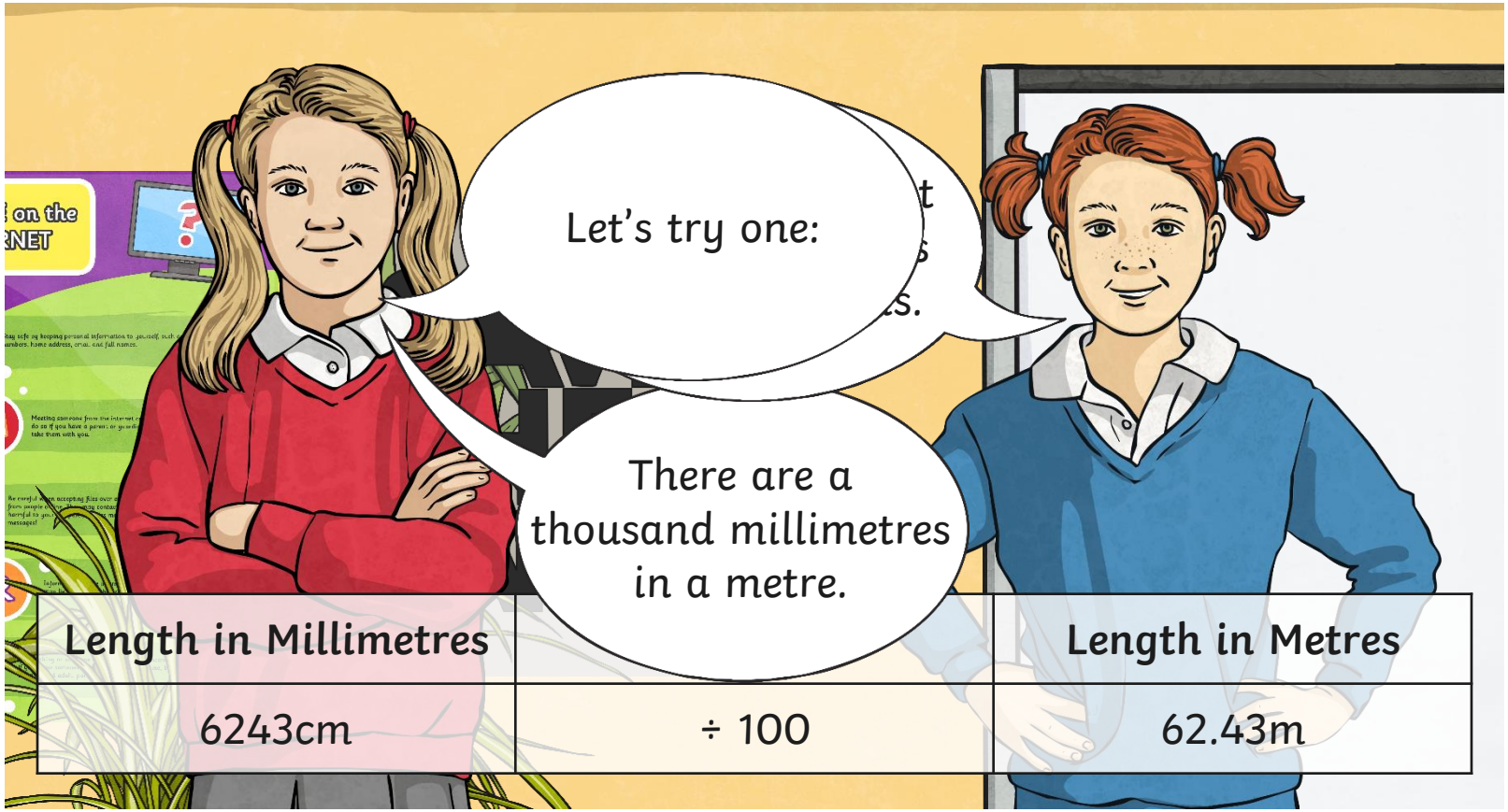
Converting Lengths

The length of this paperclip chain is given in **millimetres**.
How could we convert this into **metres**?



Length in Millimetres		Length in Metres
6243cm	÷ 100	62.43m

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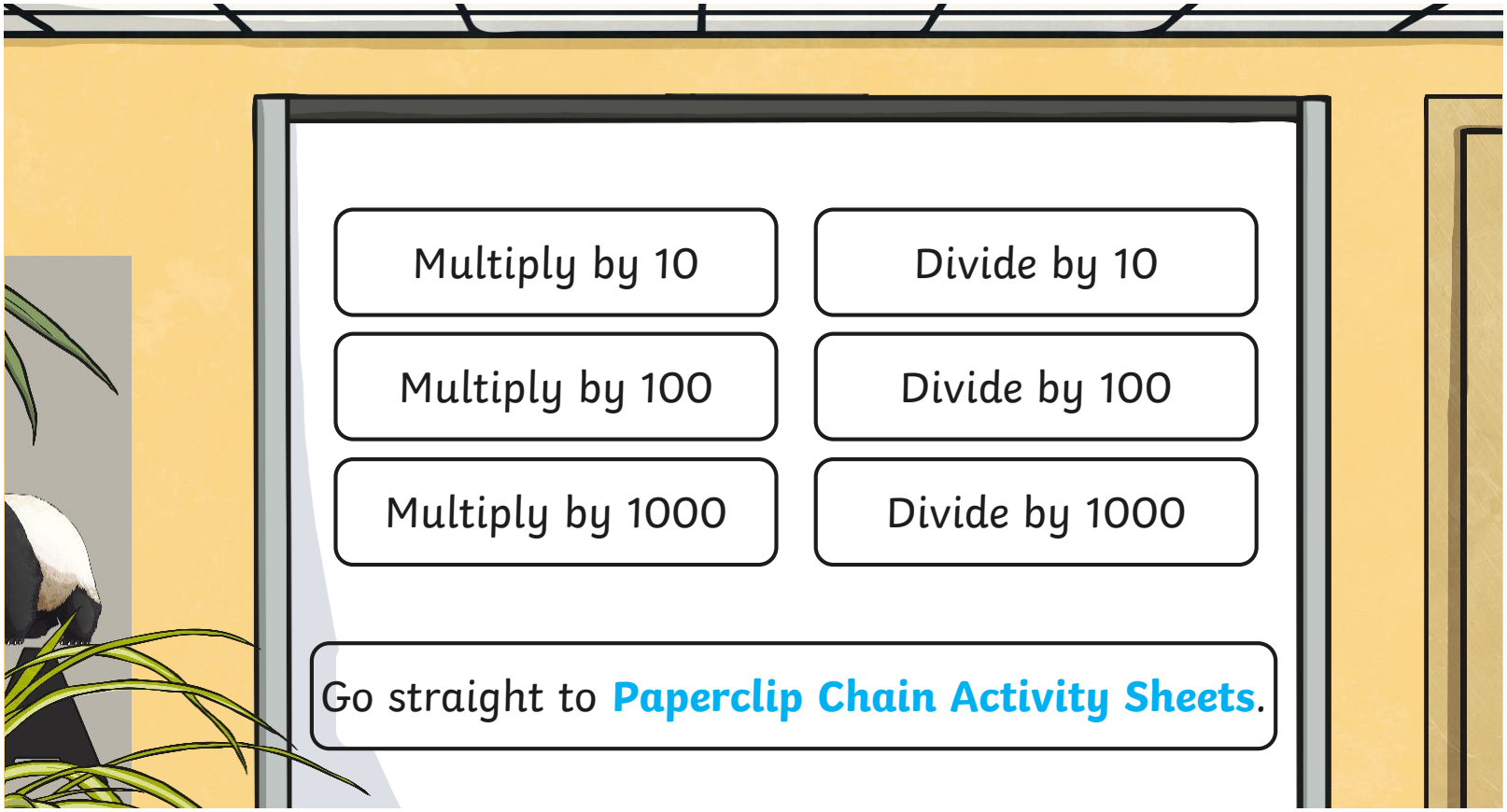
Multiplying and Dividing by 10, 100 and 1000

Click on the boxes below to remind you how to multiply and divide by 10, 100 and 1000.



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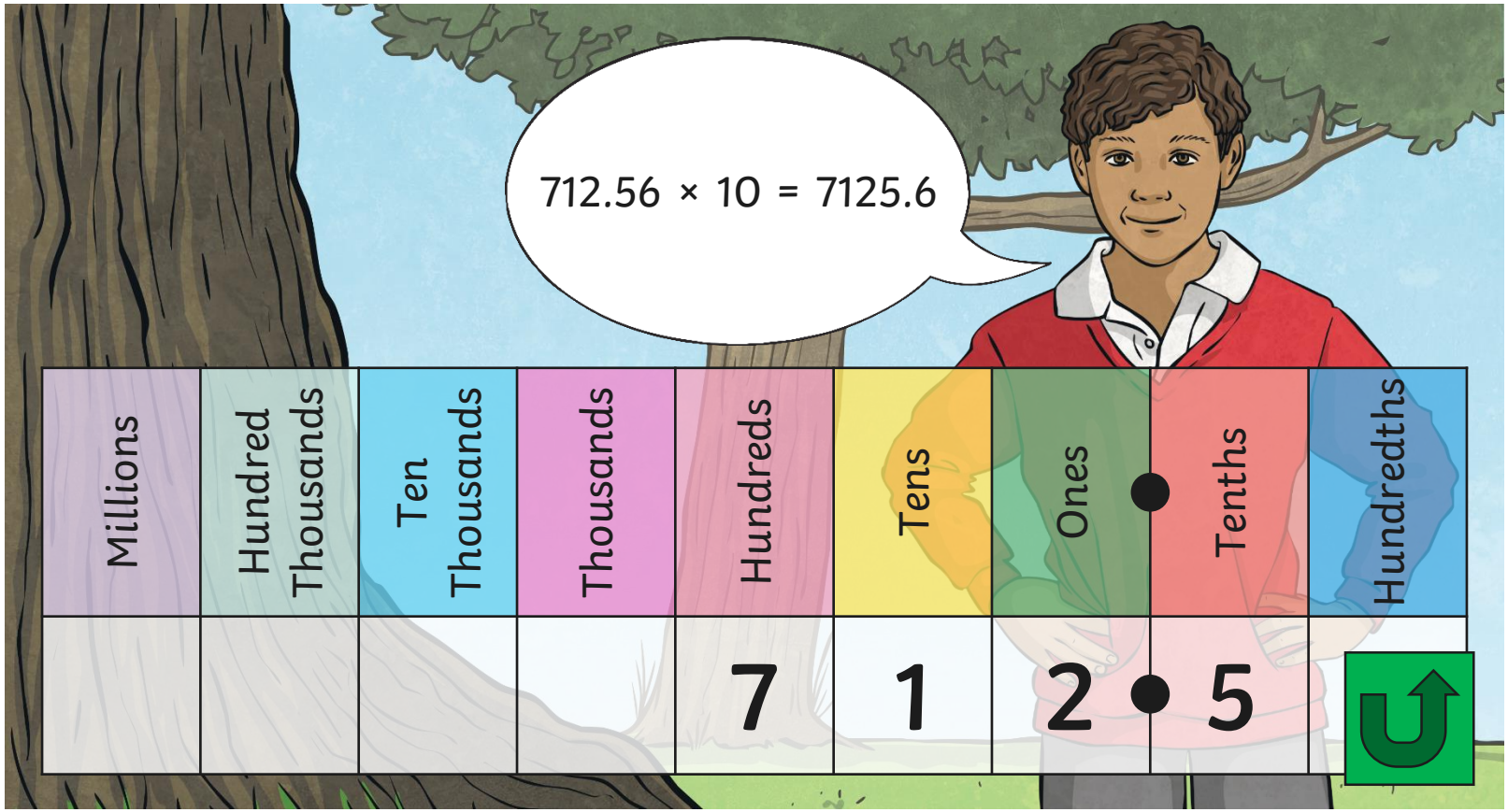
Multiplying by 10

Whole Class

When we multiply by 10, the number gets 10 times bigger.



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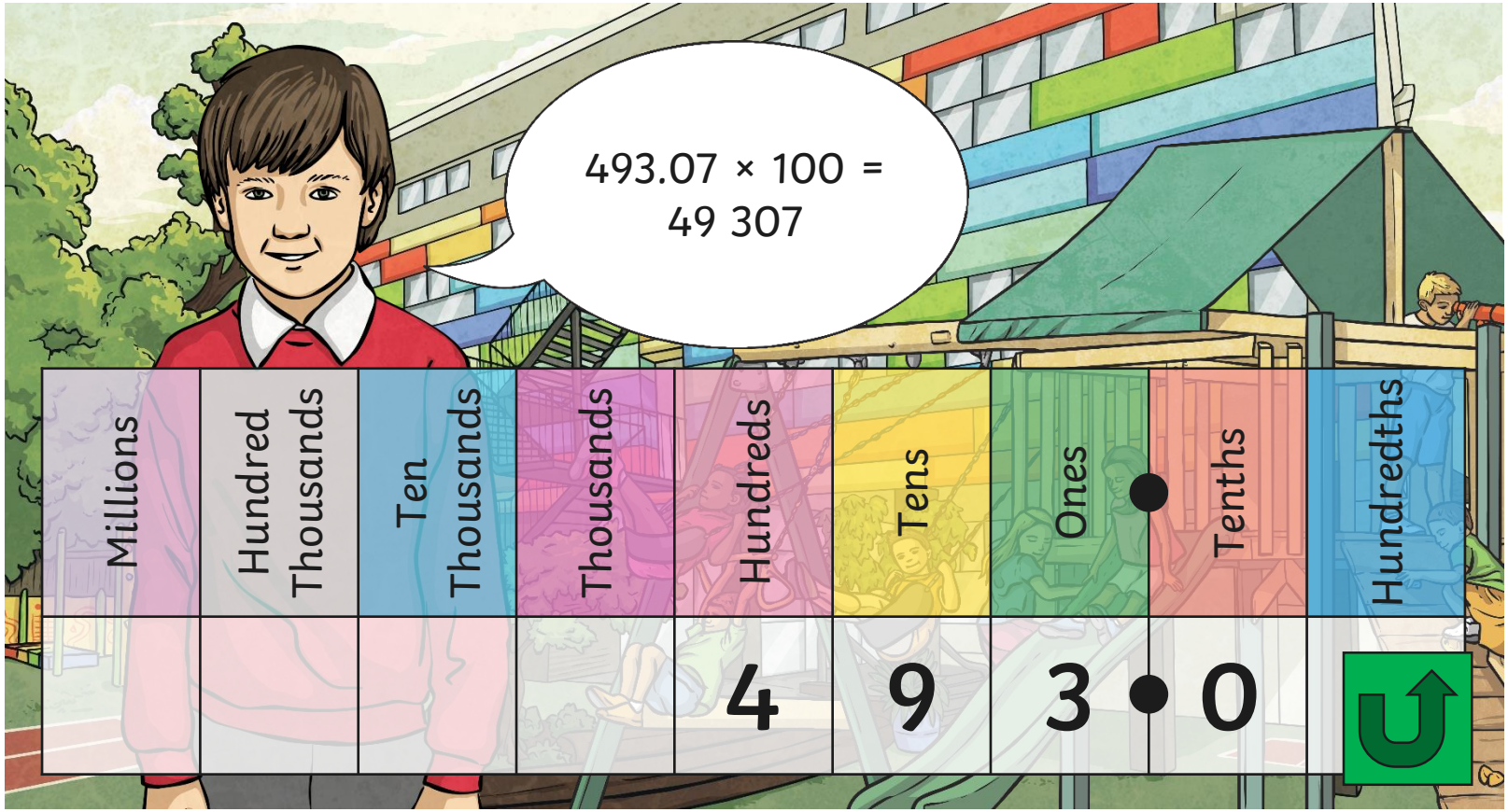
Multiplying by 100

Whole Class

When we multiply by 100, the number gets 100 times bigger.



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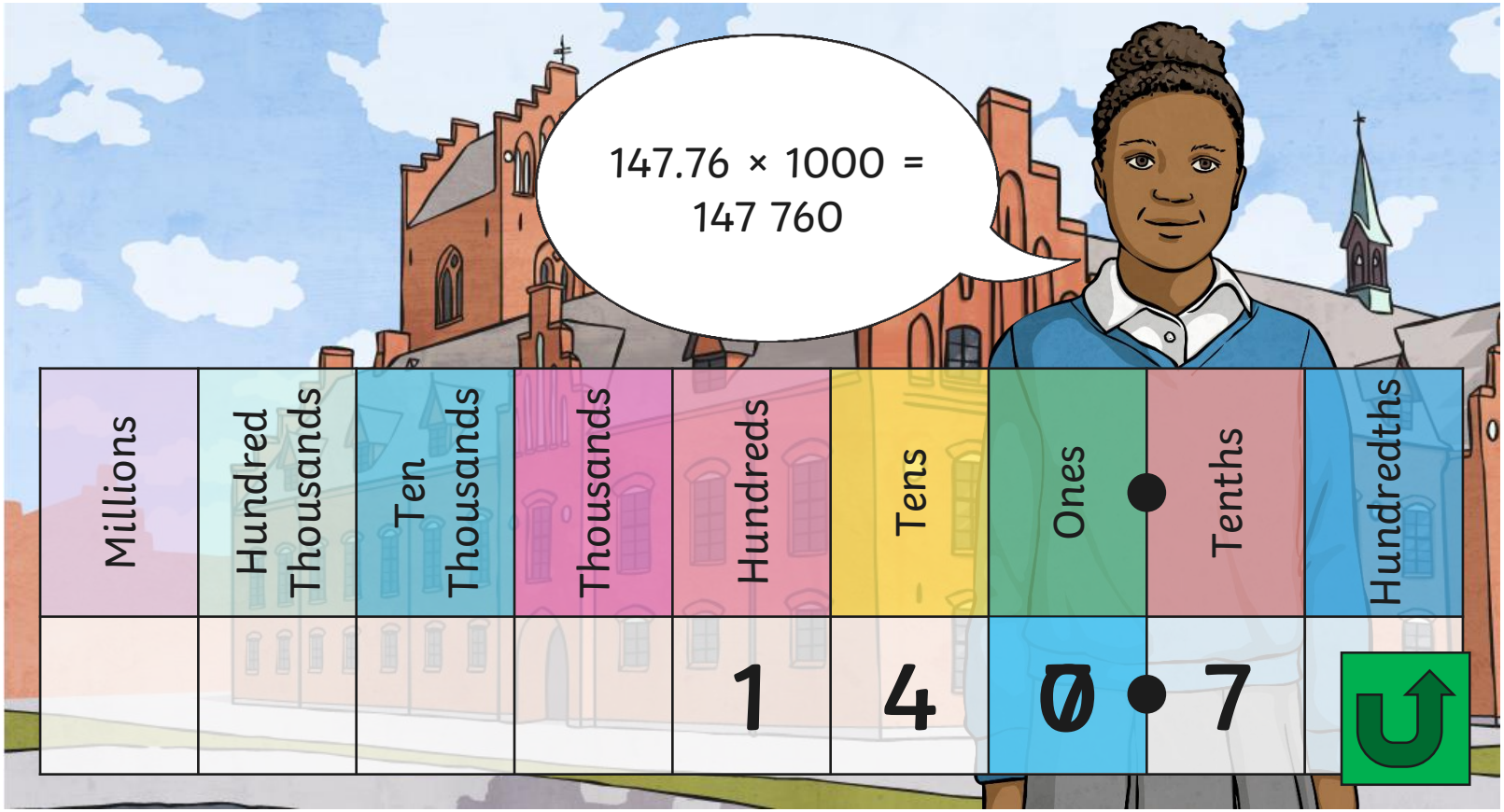
Multiplying by 1000

Whole Class

When we multiply by 1000, the number gets 1000 times bigger.



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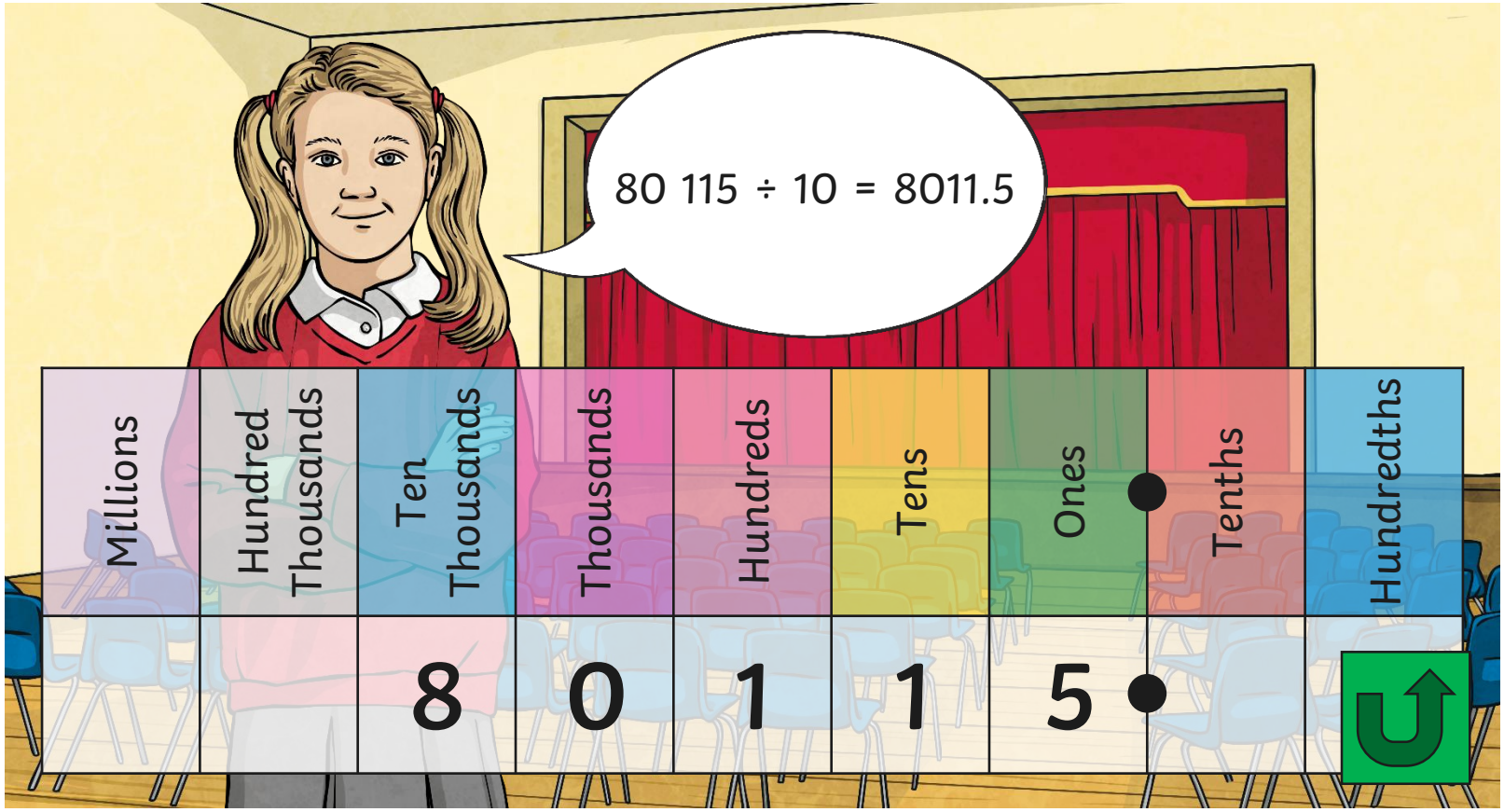
Dividing by 10

When we divide by 10, the number gets 10 times smaller.



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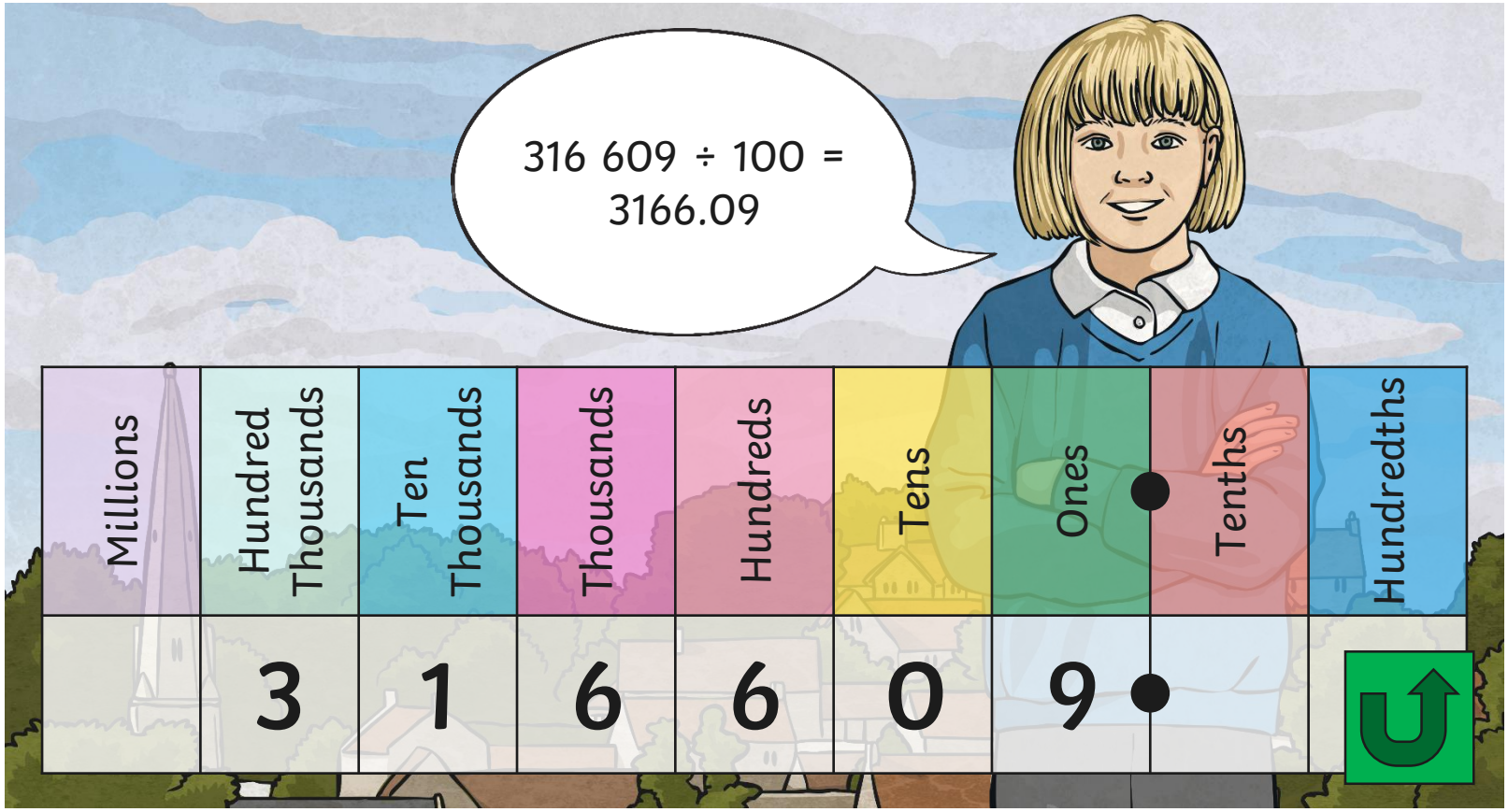
Dividing by 100

Whole Class

When we divide by 100, the number gets 100 times smaller.



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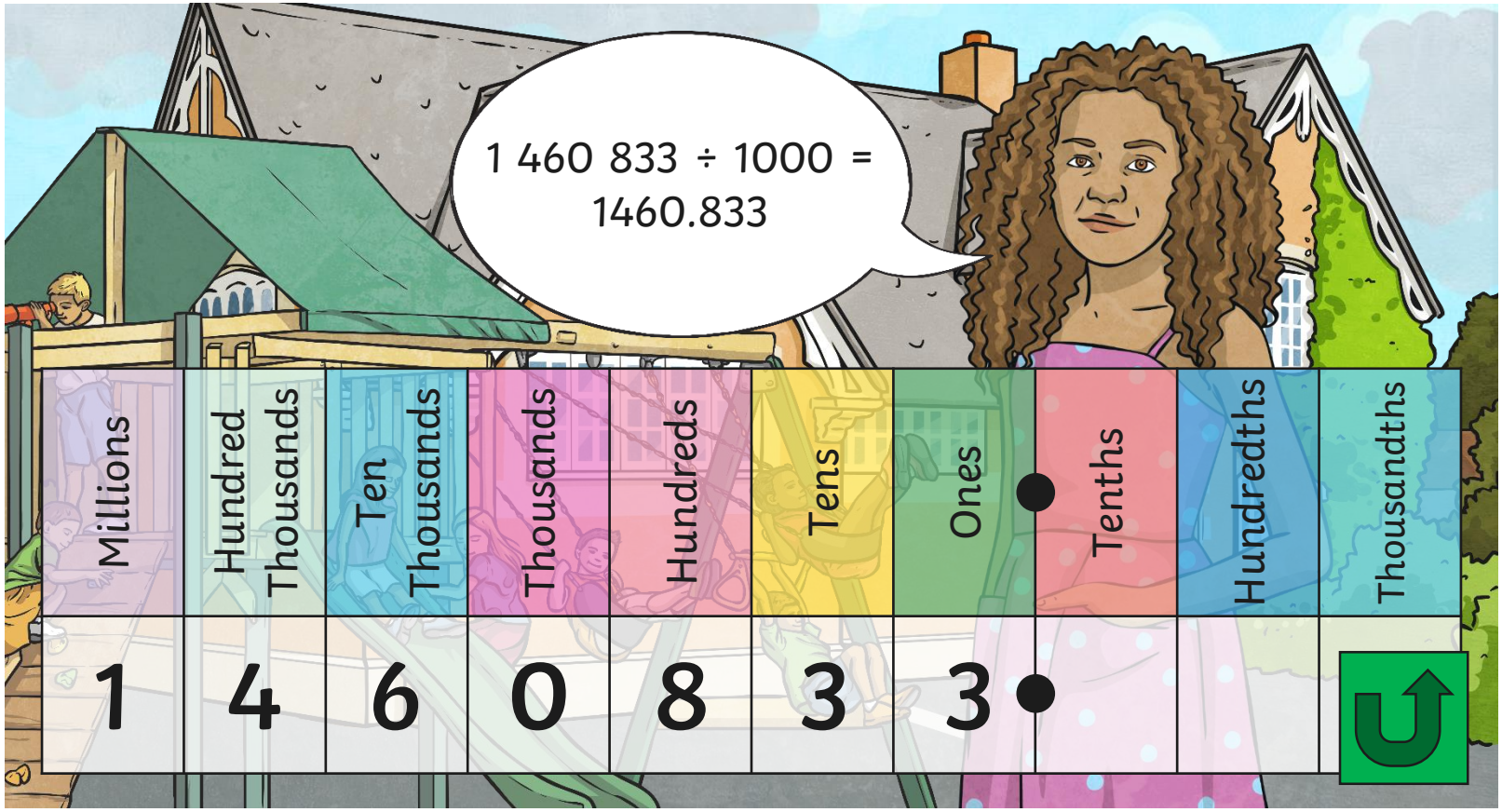
Dividing by 1000

Whole Class

When we divide by 1000, the number gets 1000 times smaller.



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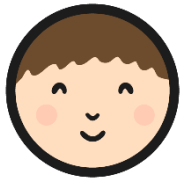
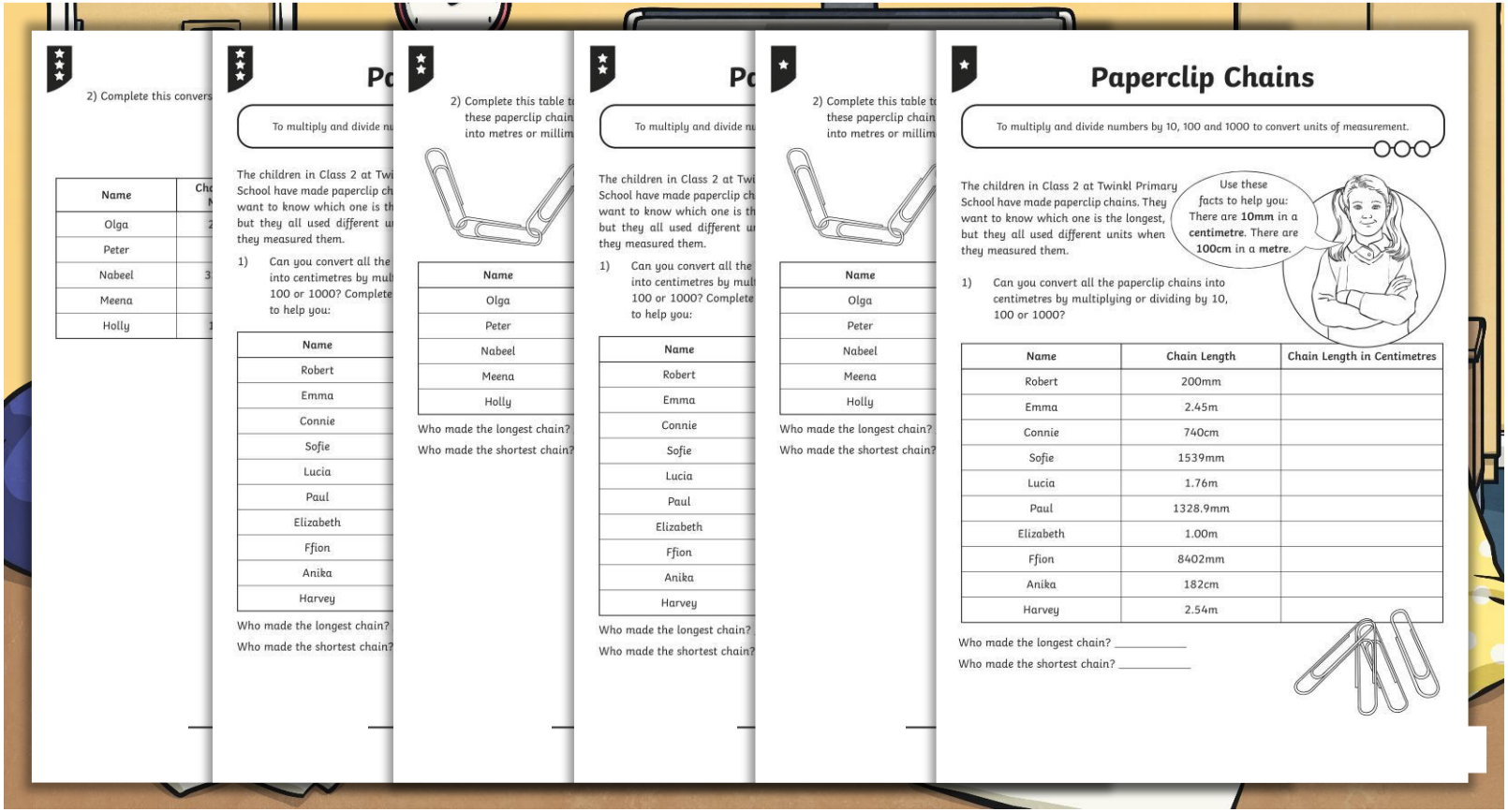
Paperclip Chains



Use your marvellous maths skills to complete these activities:



Paperclip Chains

To multiply and divide numbers by 10, 100 and 1000 to convert units of measurement.

The children in Class 2 at Twinkl Primary School have made paperclip chains. They want to know which one is the longest, but they all used different units when they measured them.

Use these facts to help you: There are **10mm** in a **centimetre**. There are **100cm** in a **metre**.

1) Can you convert all the paperclip chains into centimetres by multiplying or dividing by 10, 100 or 1000?

Name	Chain Length	Chain Length in Centimetres
Robert	200mm	
Emma	2.45m	
Connie	740cm	
Sofie	1539mm	
Lucia	1.76m	
Paul	1328.9mm	
Elizabeth	1.00m	
Ffion	8402mm	
Anika	182cm	
Harvey	2.54m	

Who made the longest chain? _____

Who made the shortest chain? _____

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Measurement Maths

Can you think of any other units of measurement conversions which would require you to multiply and divide by 10, 100 or 1000?

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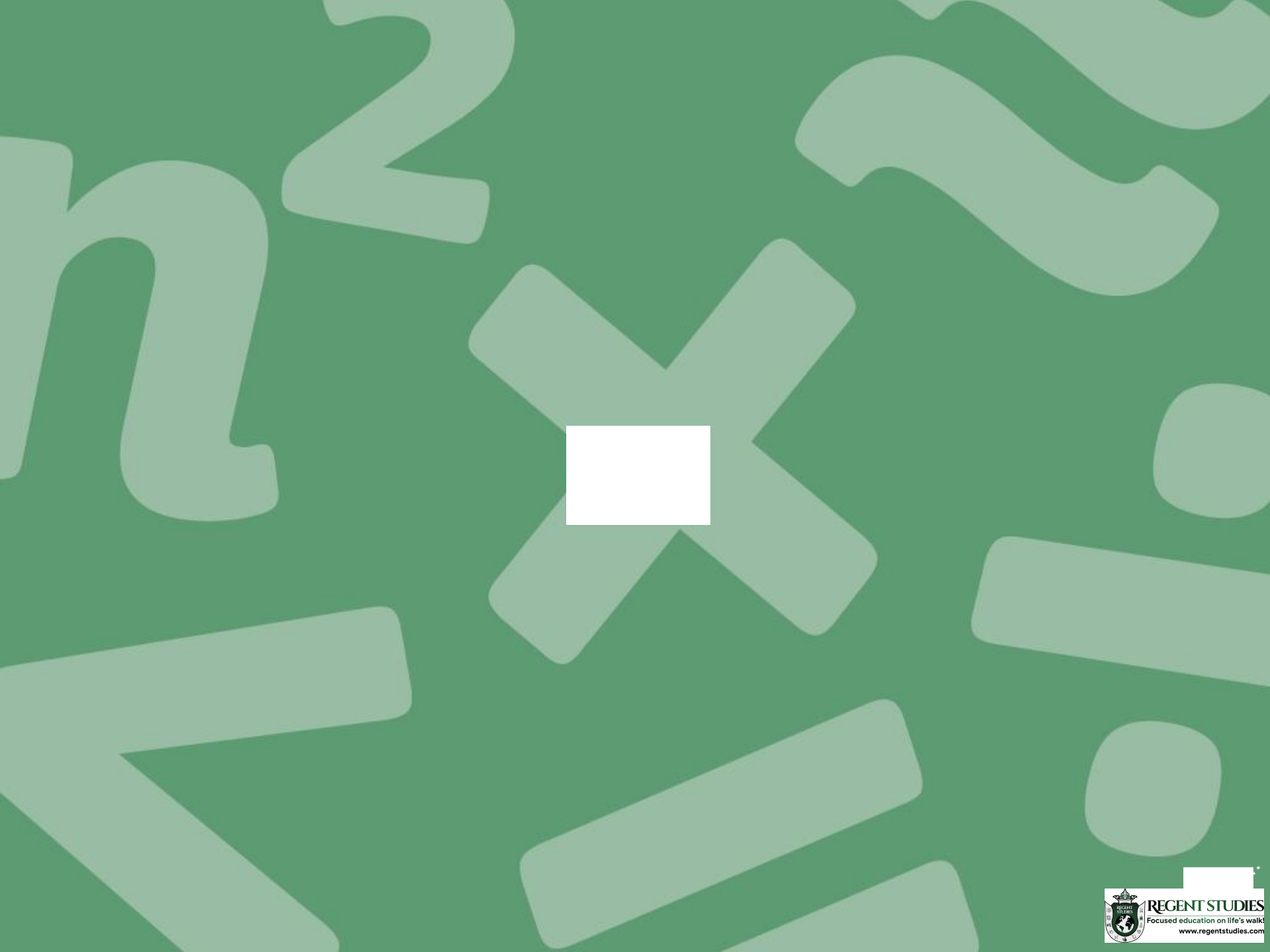

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