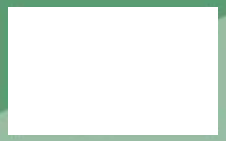
Maths

Multiplication and Division

The Distributive Law



Aim

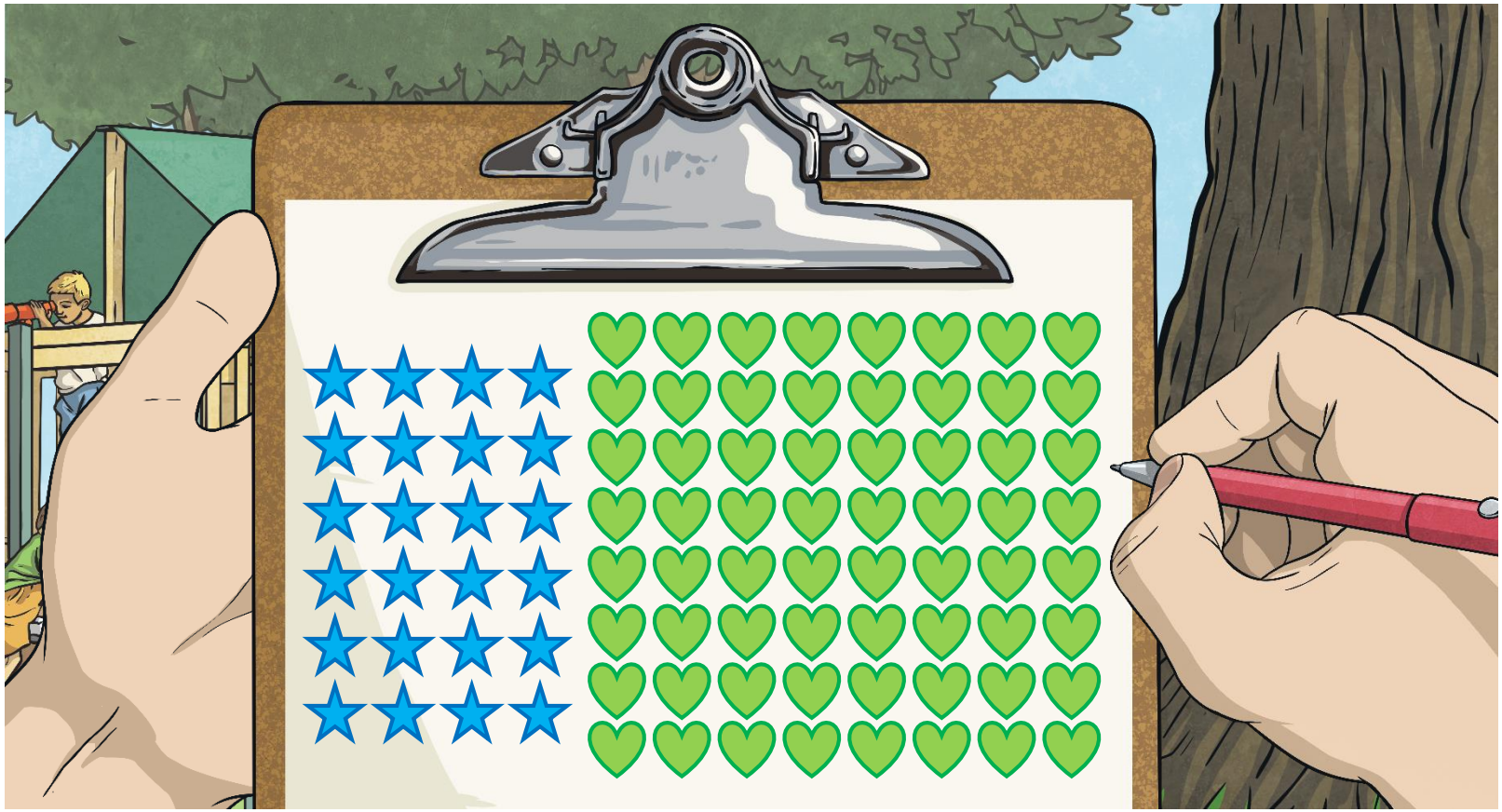
- I can use my understanding of the distributive law to help me to solve problems.

Success Criteria

- I can explain what the distributive law is.
- I can solve equations with brackets in them by writing an equivalent calculation.

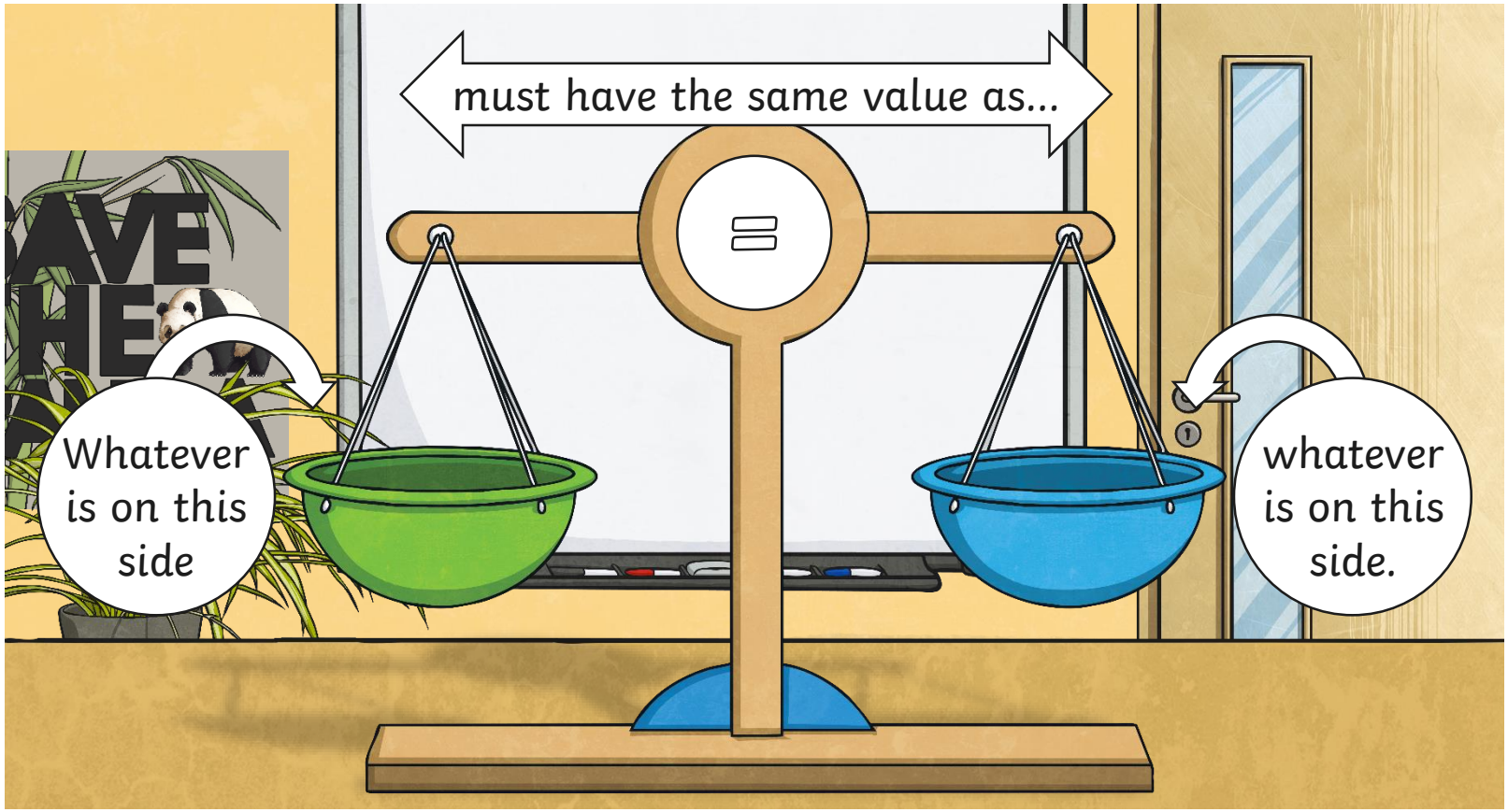
Arrays

How many different calculations can you write to describe these arrays? You can use the ×, ÷ and + signs.



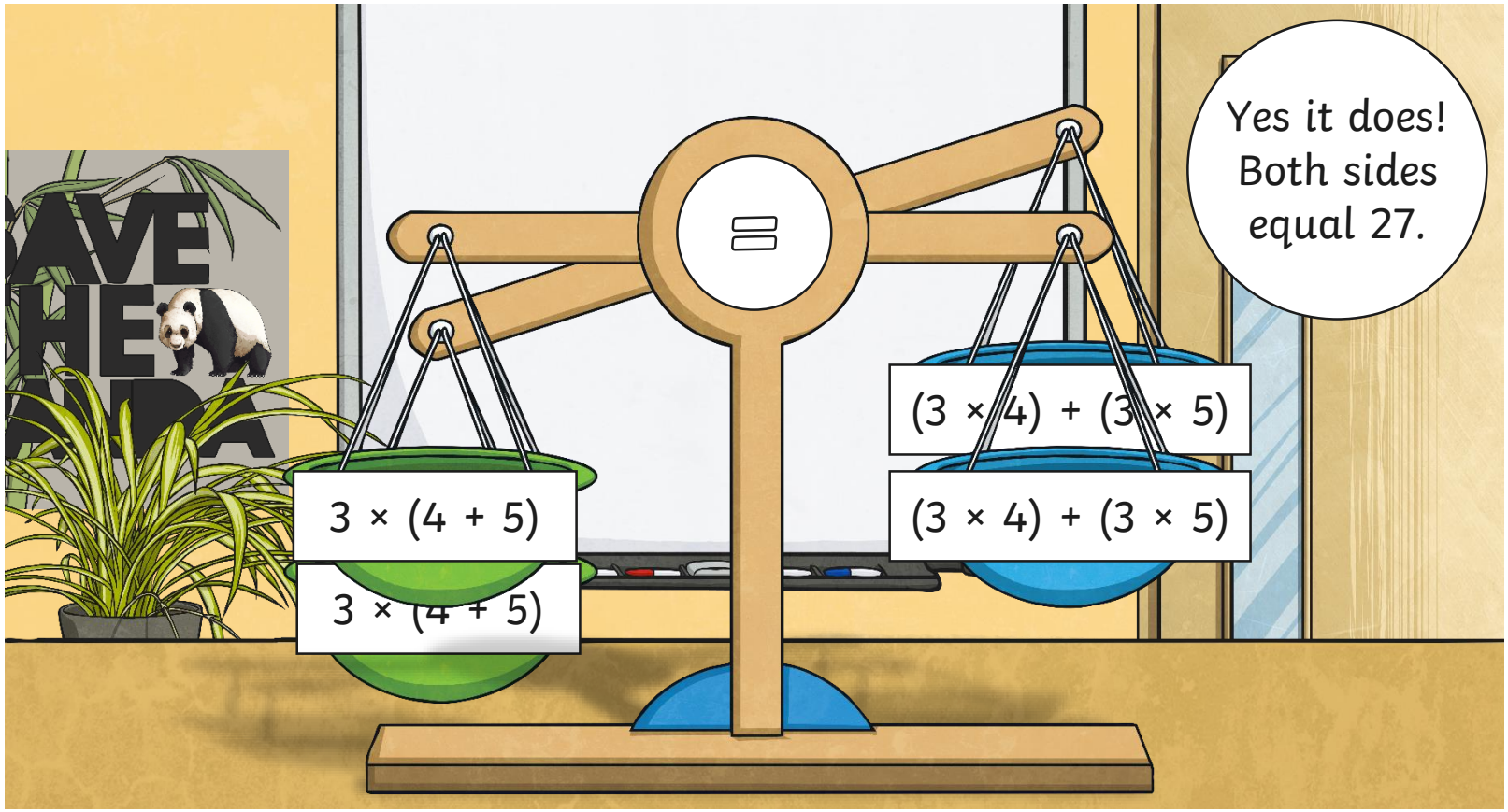
The Distributive Law

The equals sign means that the numbers or calculations on either side of the sign must have the same value. They have to balance.



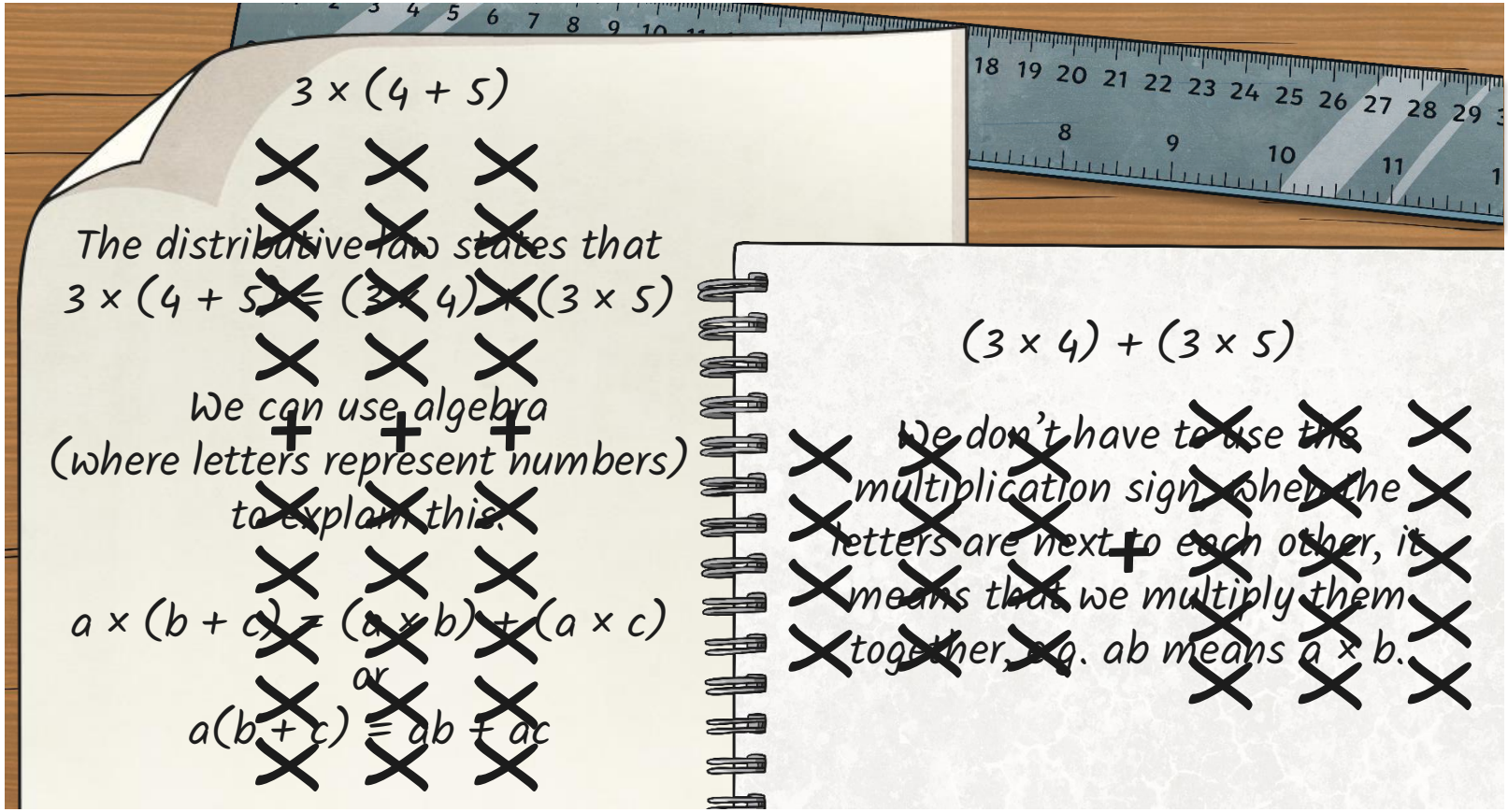
The Distributive Law

Do these scales balance?



The Distributive Law

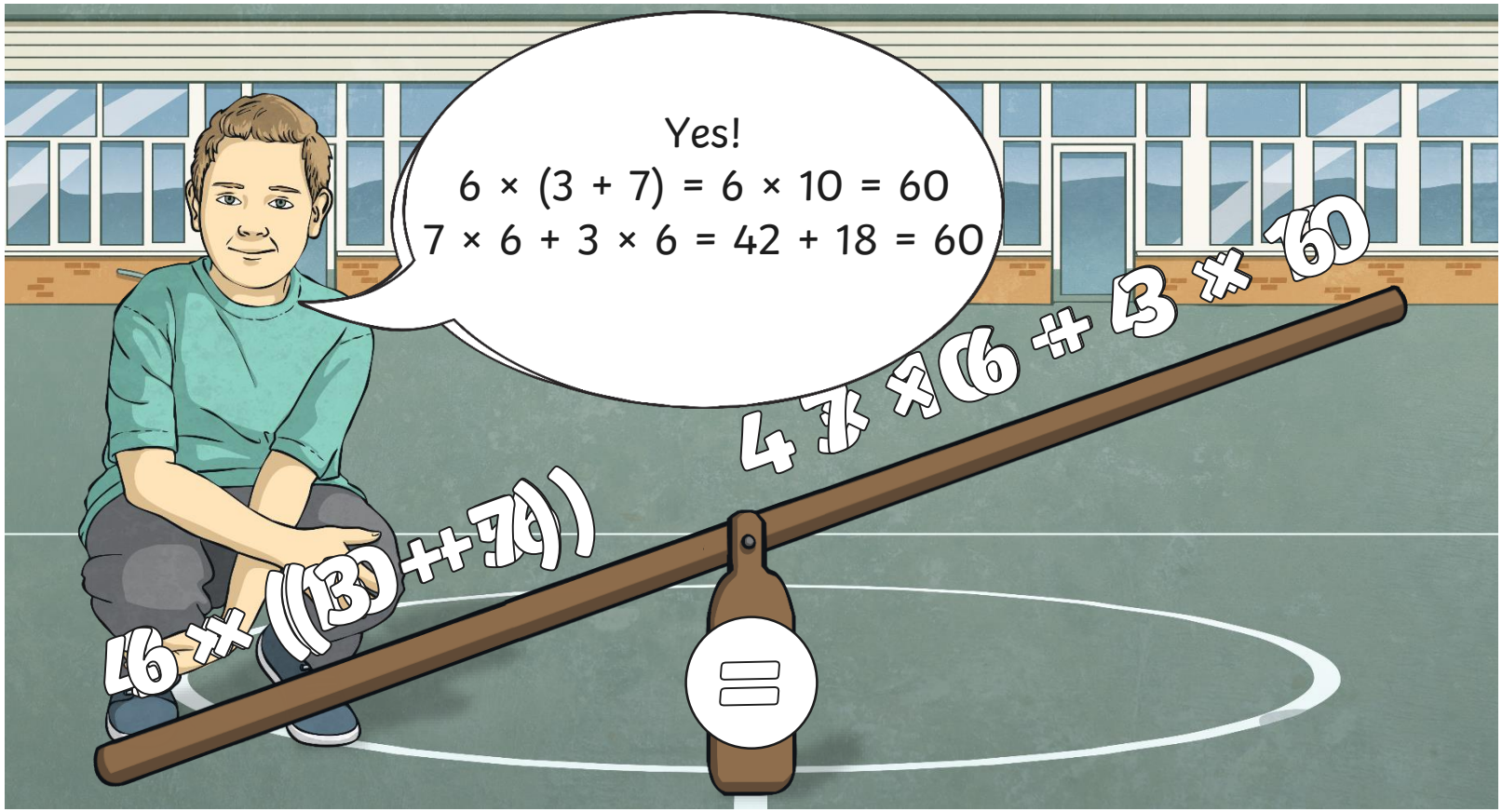
Does 3 × (4 + 5) equal (3 × 4) + (3 × 5)?



Make It Balance

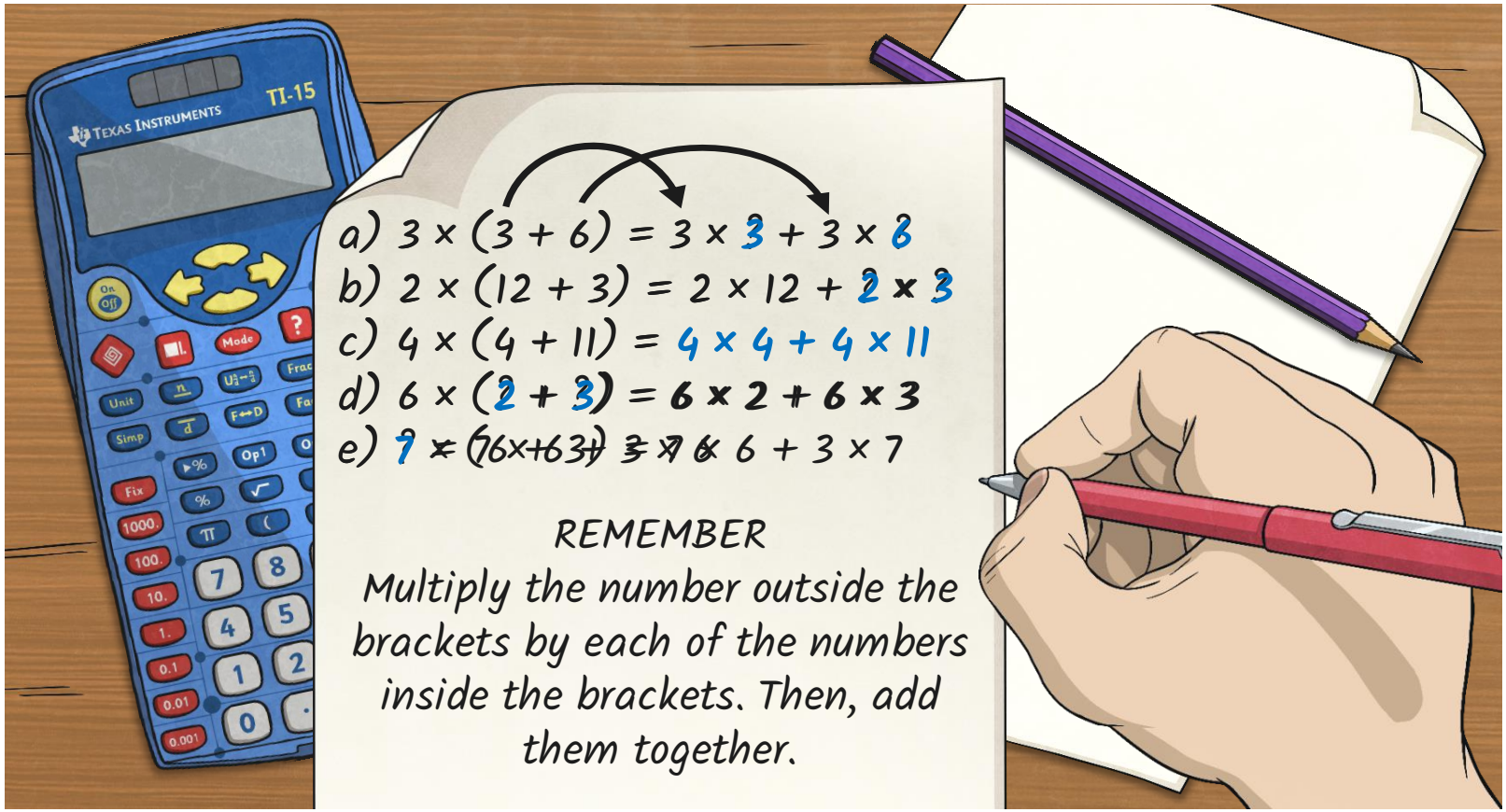
Whole Class

Are these equations correct?
Would the see-saws balance?



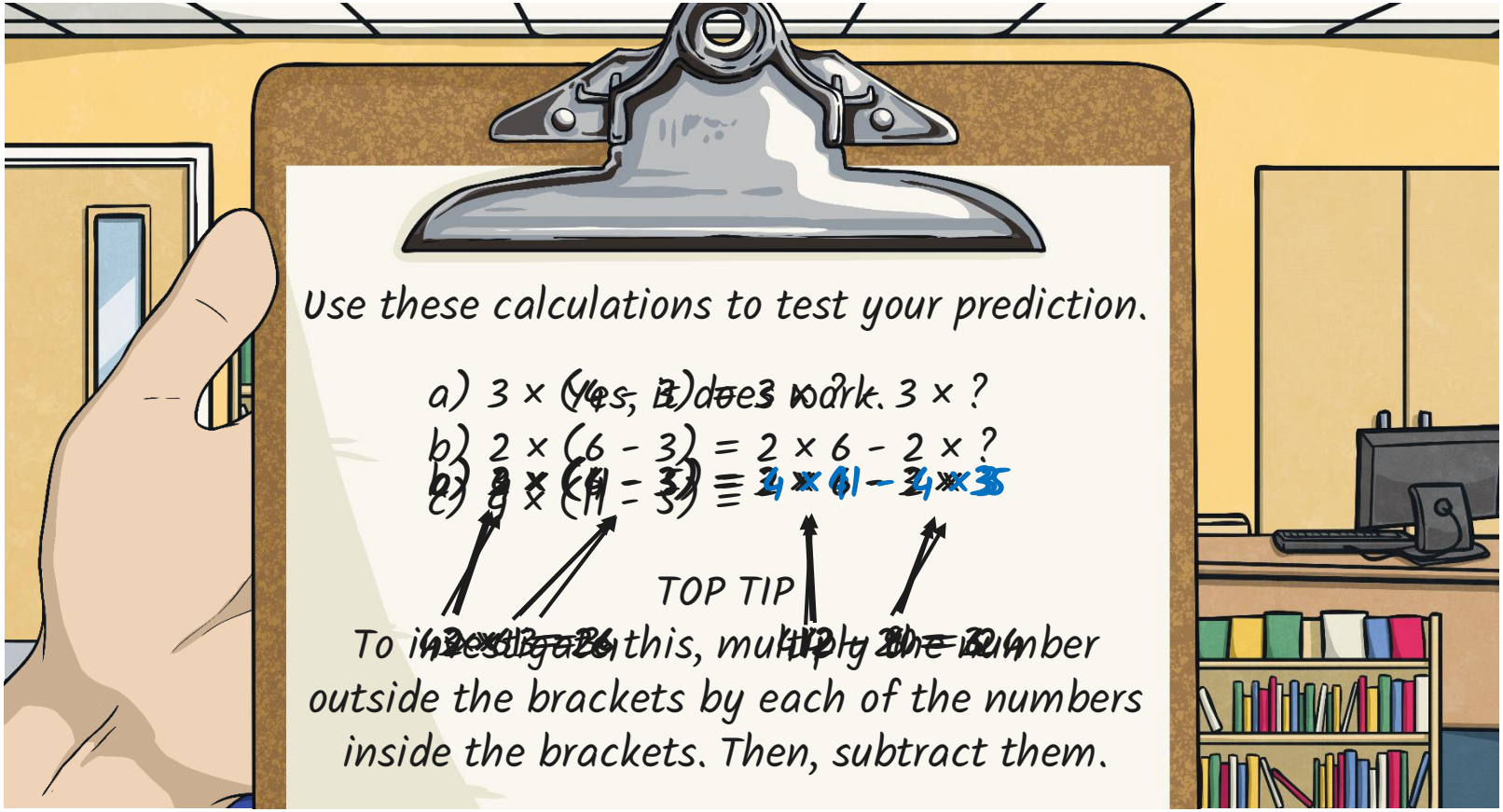
Banish the Brackets

Can you write an equivalent calculation to make these equations correct?

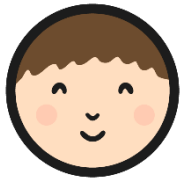


Subtraction

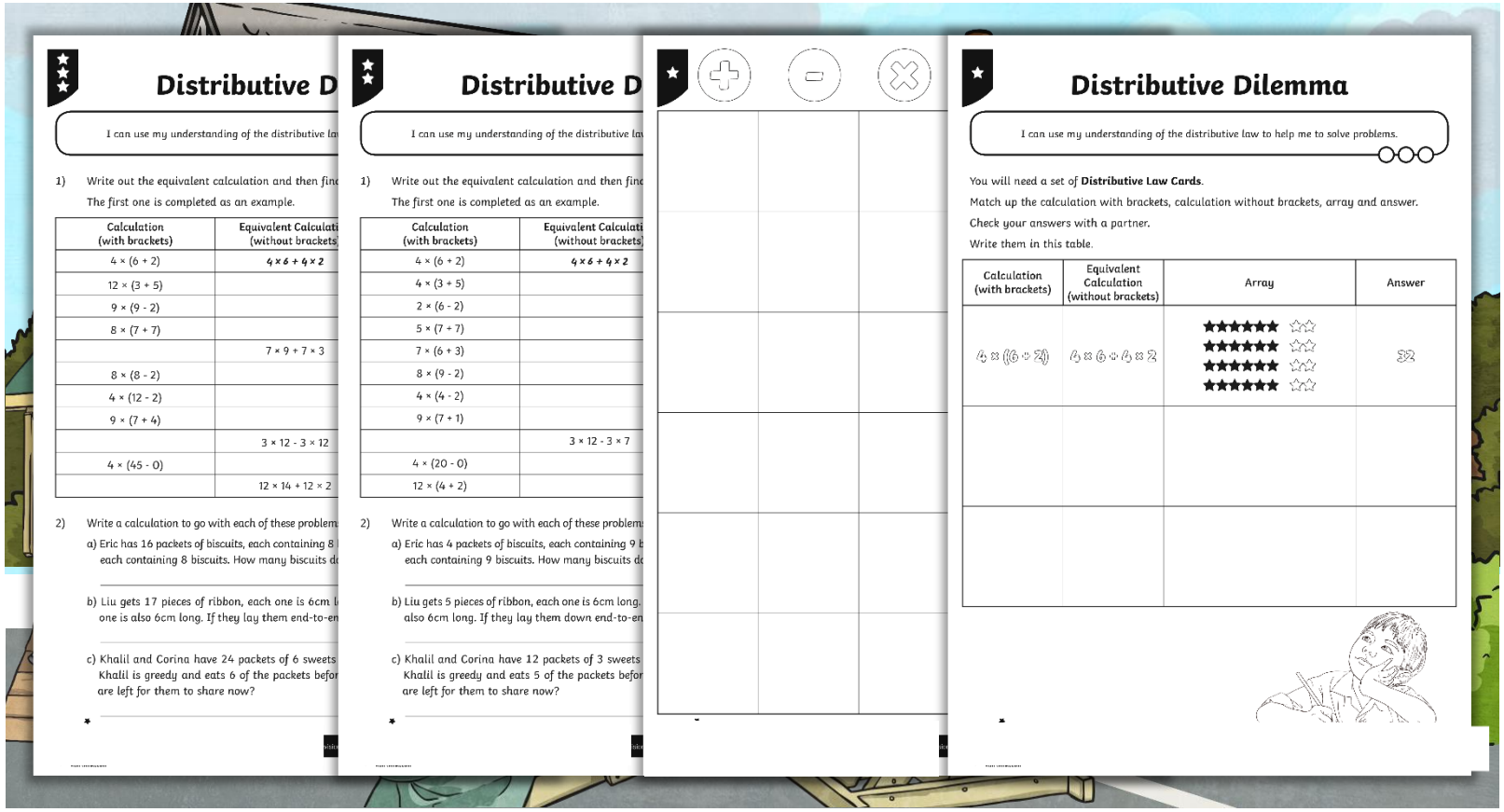
Does the distributive law work if the calculation in the brackets involves subtraction instead of addition?



Distributive Dilemma



Use your marvellous maths skill to complete these activities:



Distributive D

I can use my understanding of the distributive la

1) Write out the equivalent calculation and then find
The first one is completed as an example.

Calculation (with brackets)	Equivalent Calculati (without brackets)
4 × (6 + 2)	**4 × 6 + 4 × 2**
12 × (3 + 5)	
9 × (9 - 2)	
8 × (7 + 7)	
	7 × 9 + 7 × 3
8 × (8 - 2)	
4 × (12 - 2)	
9 × (7 + 4)	
	3 × 12 - 3 × 12
4 × (45 - 0)	
	12 × 14 + 12 × 2

2) Write a calculation to go with each of these problem
a) Eric has 16 packets of biscuits, each containing 8 each containing 8 biscuits. How many biscuits d
b) Liu gets 17 pieces of ribbon, each one is 6cm one is also 6cm long. If they lay them end-to-en
c) Khalil and Corina have 24 packets of 6 sweets Khalil is greedy and eats 6 of the packets befor are left for them to share now?

Distributive D

I can use my understanding of the distributive la

1) Write out the equivalent calculation and then find
The first one is completed as an example.

Calculation (with brackets)	Equivalent Calculati (without brackets)
4 × (6 + 2)	**4 × 6 + 4 × 2**
4 × (3 + 5)	
2 × (6 - 2)	
5 × (7 + 7)	
7 × (6 + 3)	
8 × (9 - 2)	
4 × (4 - 2)	
9 × (7 + 1)	
	3 × 12 - 3 × 7
4 × (20 - 0)	
12 × (4 + 2)	

2) Write a calculation to go with each of these problem
a) Eric has 4 packets of biscuits, each containing 9 each containing 9 biscuits. How many biscuits d
b) Liu gets 5 pieces of ribbon, each one is 6cm long. also 6cm long. If they lay them down end-to-en
c) Khalil and Corina have 12 packets of 3 sweets Khalil is greedy and eats 5 of the packets befor are left for them to share now?

Distributive Dilemma

I can use my understanding of the distributive law to help me to solve problems.

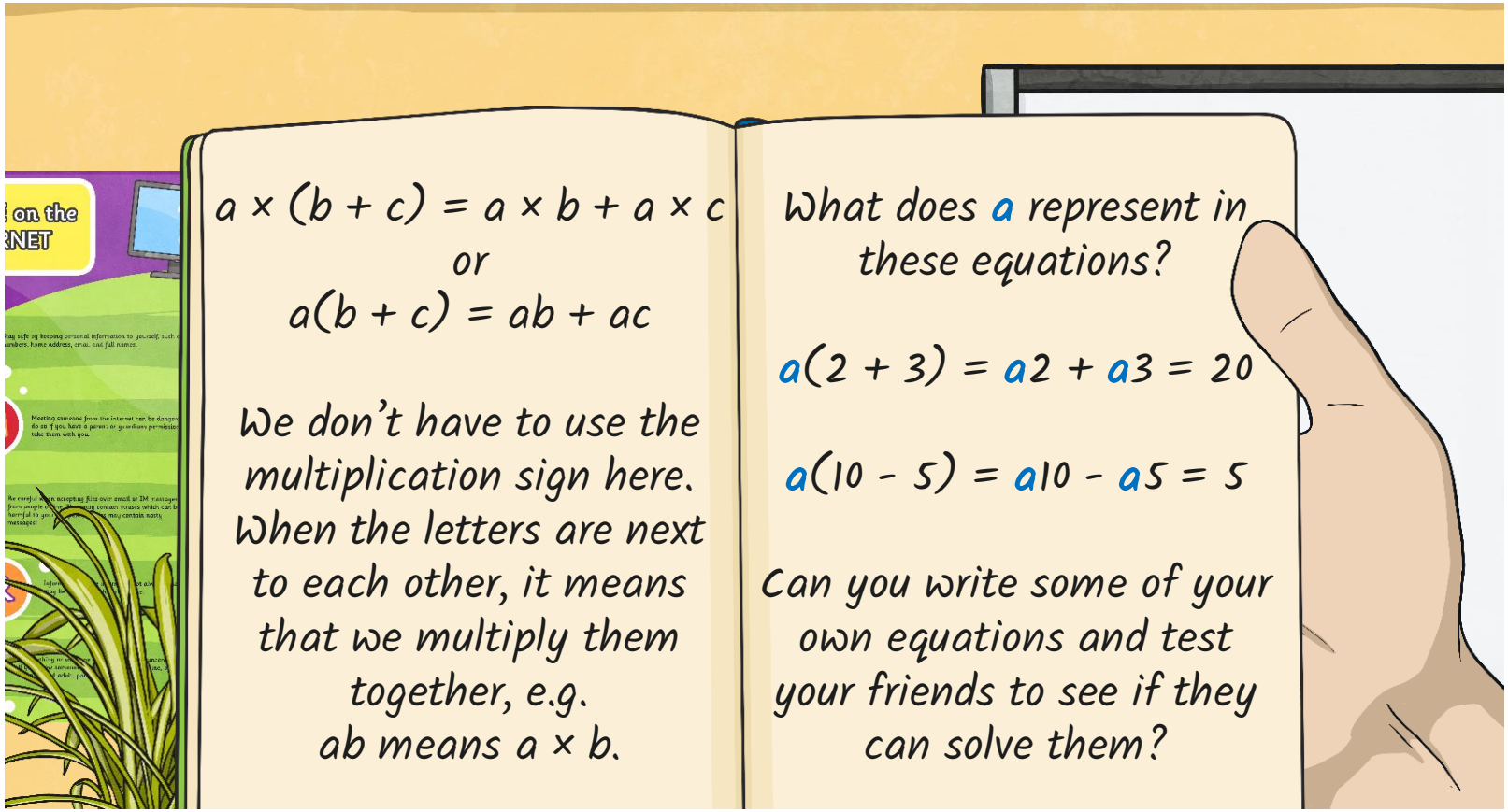
You will need a set of **Distributive Law Cards**.
Match up the calculation with brackets, calculation without brackets, array and answer.
Check your answers with a partner.
Write them in this table.

Calculation (with brackets)	Equivalent Calculation (without brackets)	Array	Answer
4 × (6 + 2)	4 × 6 + 4 × 2		32

Algebra

Whole Class

The distributive law states that $3 \times (4 + 5) = 3 \times 4 + 3 \times 5$
We can use algebra (where letters represent numbers) to explain this:



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