

# Maths Fluency

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Mrs Fallon  
Maths Leader

Just because a child can recall a multiplication fact...

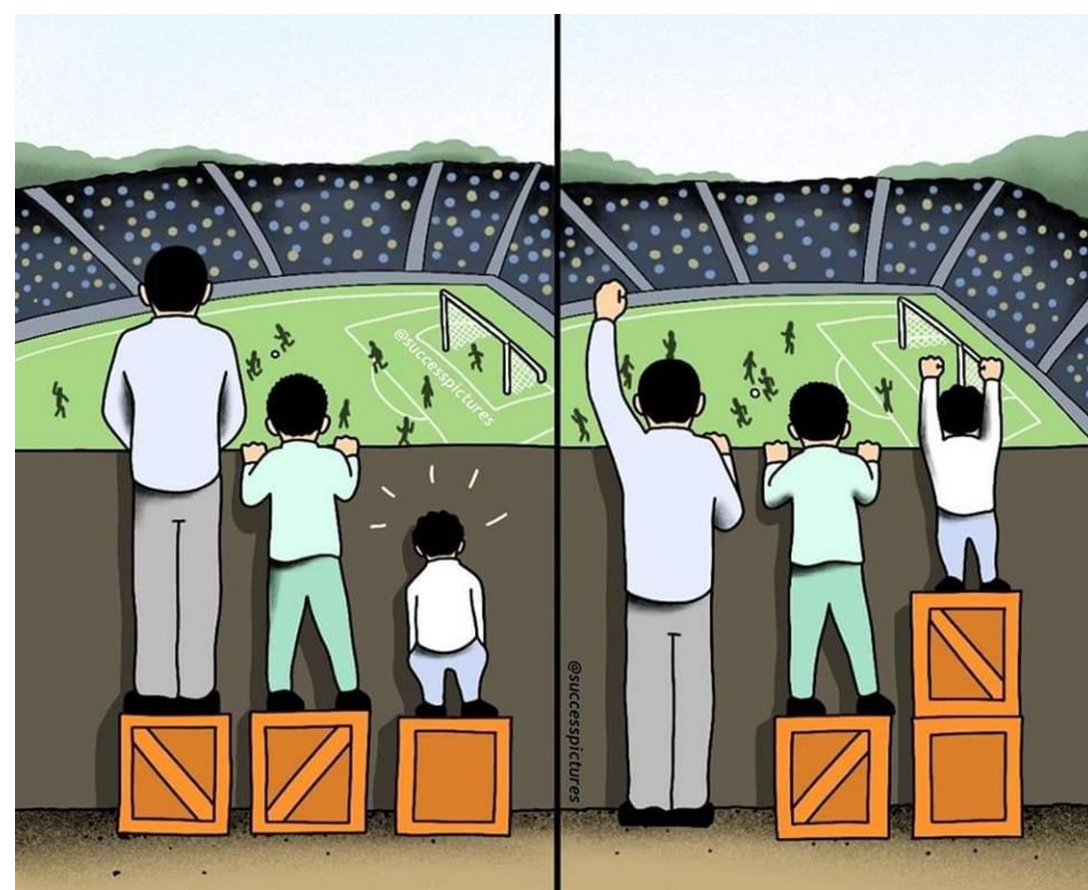
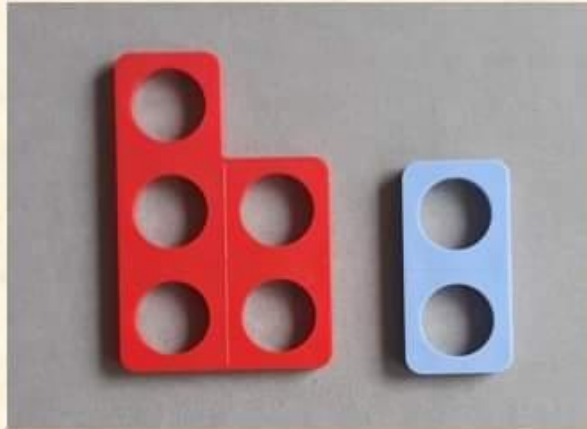
$$5 \times 2 = ?$$

$$5 \times 2 = 10$$

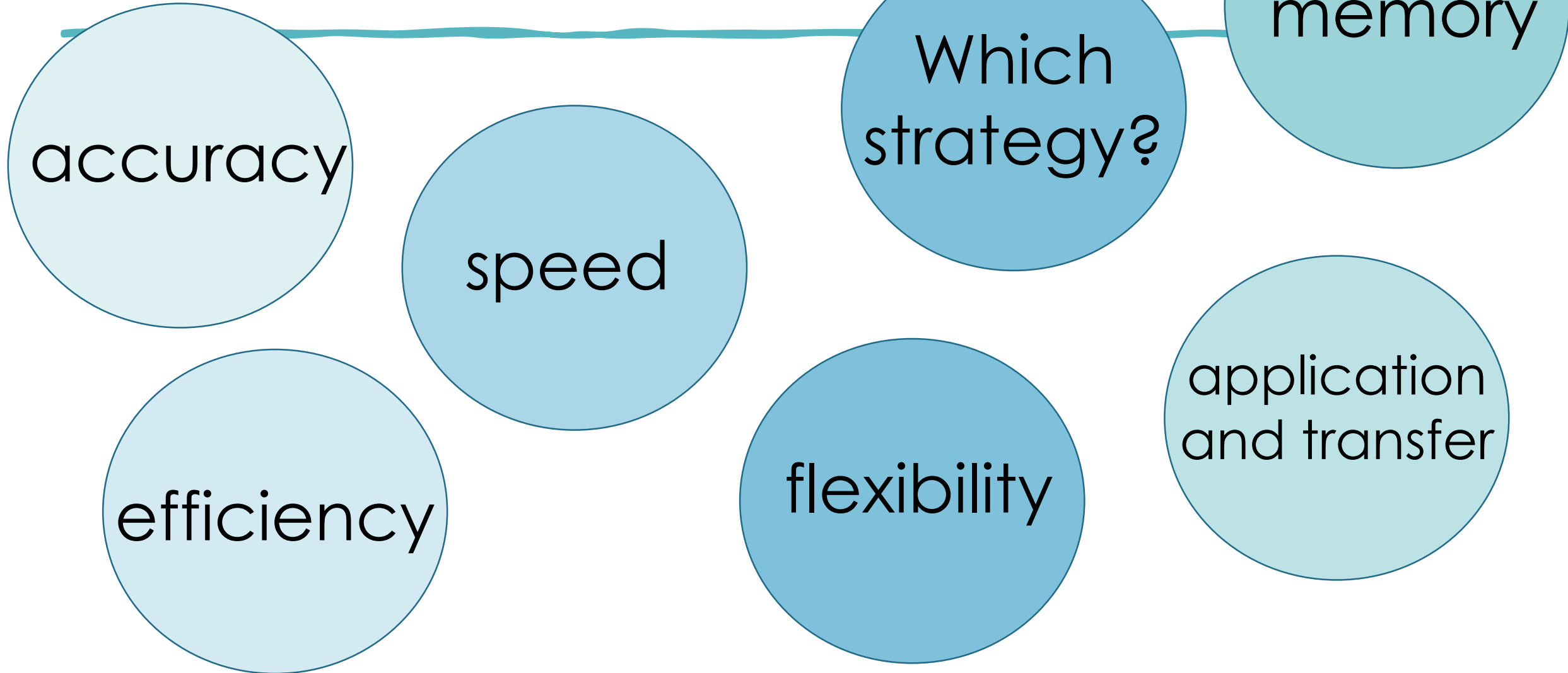


Show me  
 $5 \times 2$

...doesn't mean that they understand it!



# What is fluency?



# Why is it so important?

Maths fluency allows learners to understand the relationship between numbers. It means that not only do they get to grips with how they answer something, but they also understand why they've reached their answer.

They can spot mistakes more easily.

Pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

# How are we doing it at St Joseph's?

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3 times a week for 15 minutes.

KS1 - Mastering Number

Years 3 and 4 - Number Sense Times

Years 5 and 6 – Various resources. Number Sense when needed.

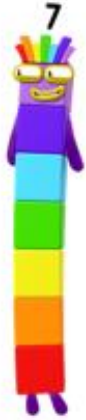
Additional fluency homework.

# Mastering Number – KS1

$5 + 1$



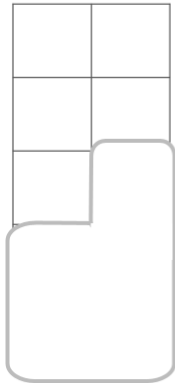
$5 + 2$



$5 + 3$



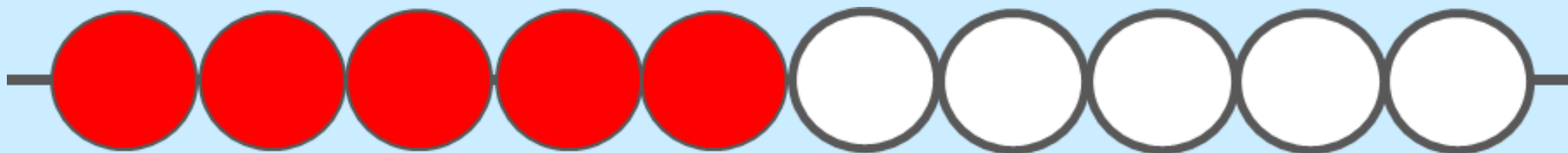
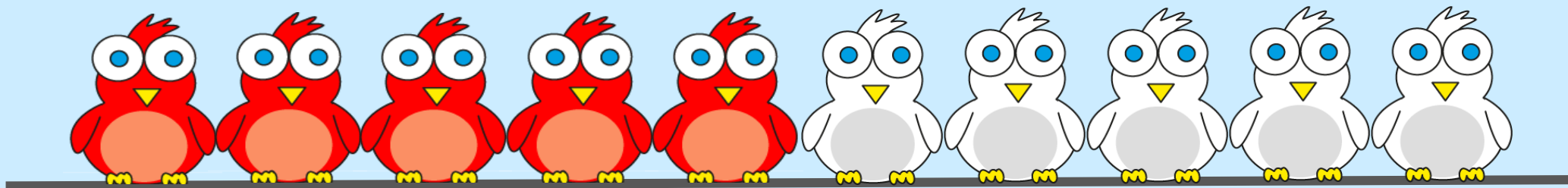
$5 + 4$

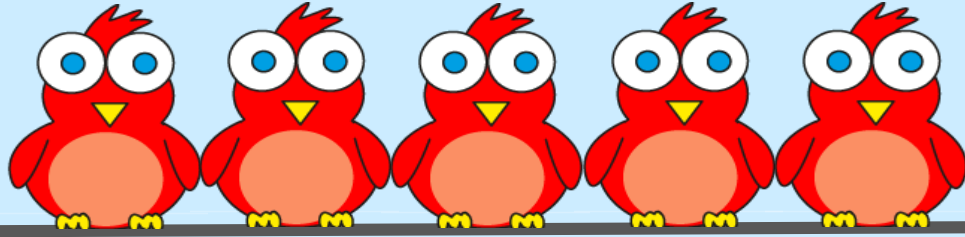


Mastering Number 2021/22 ncfm.org.uk

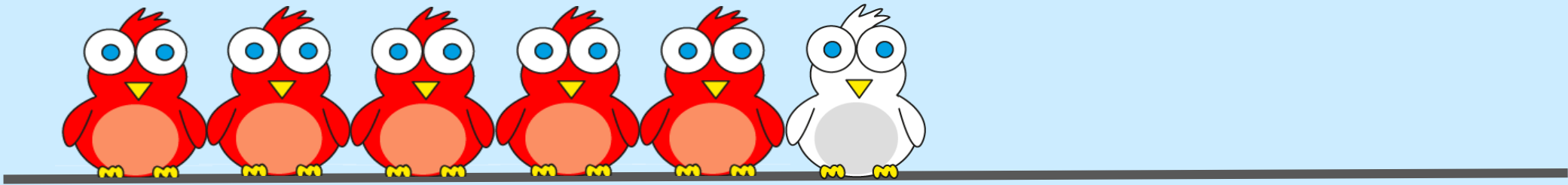
5 needs \_\_\_\_\_ to make \_\_\_\_\_ ; \_\_\_\_\_ is  
made of 5 and \_\_\_\_\_ .

What's the same? What's different?

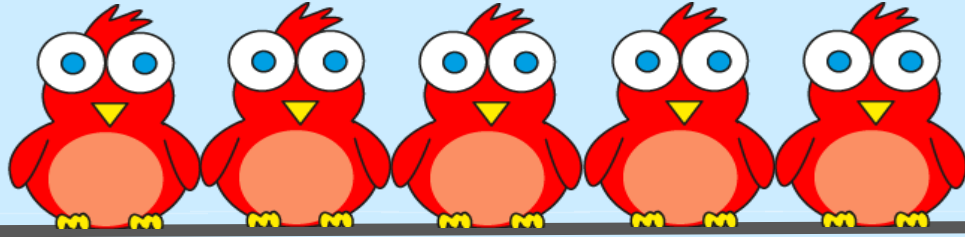


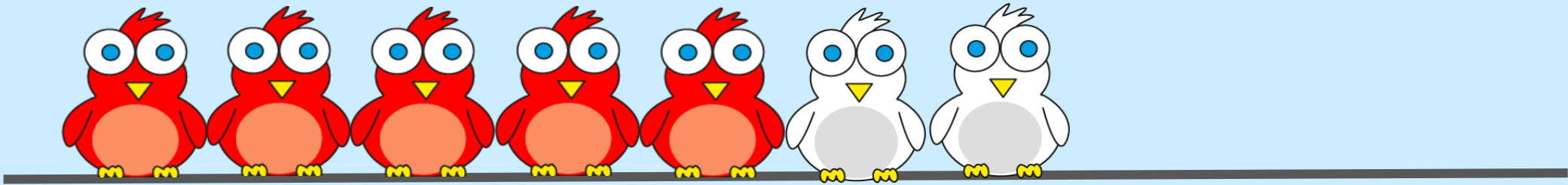




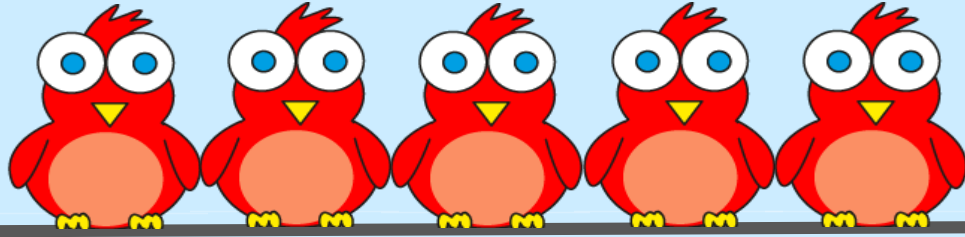


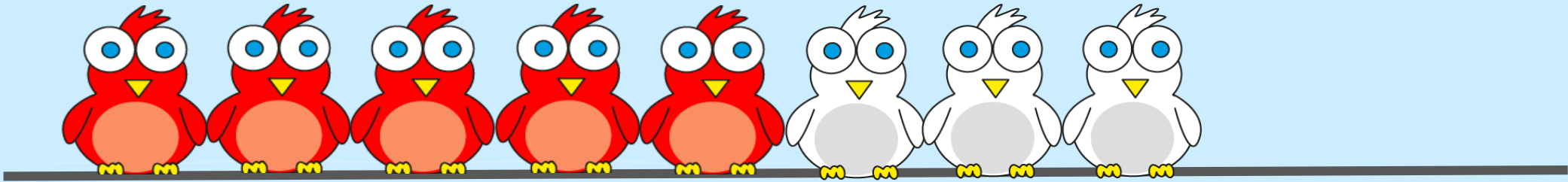
5 needs \_\_\_\_ to make \_\_\_\_ .





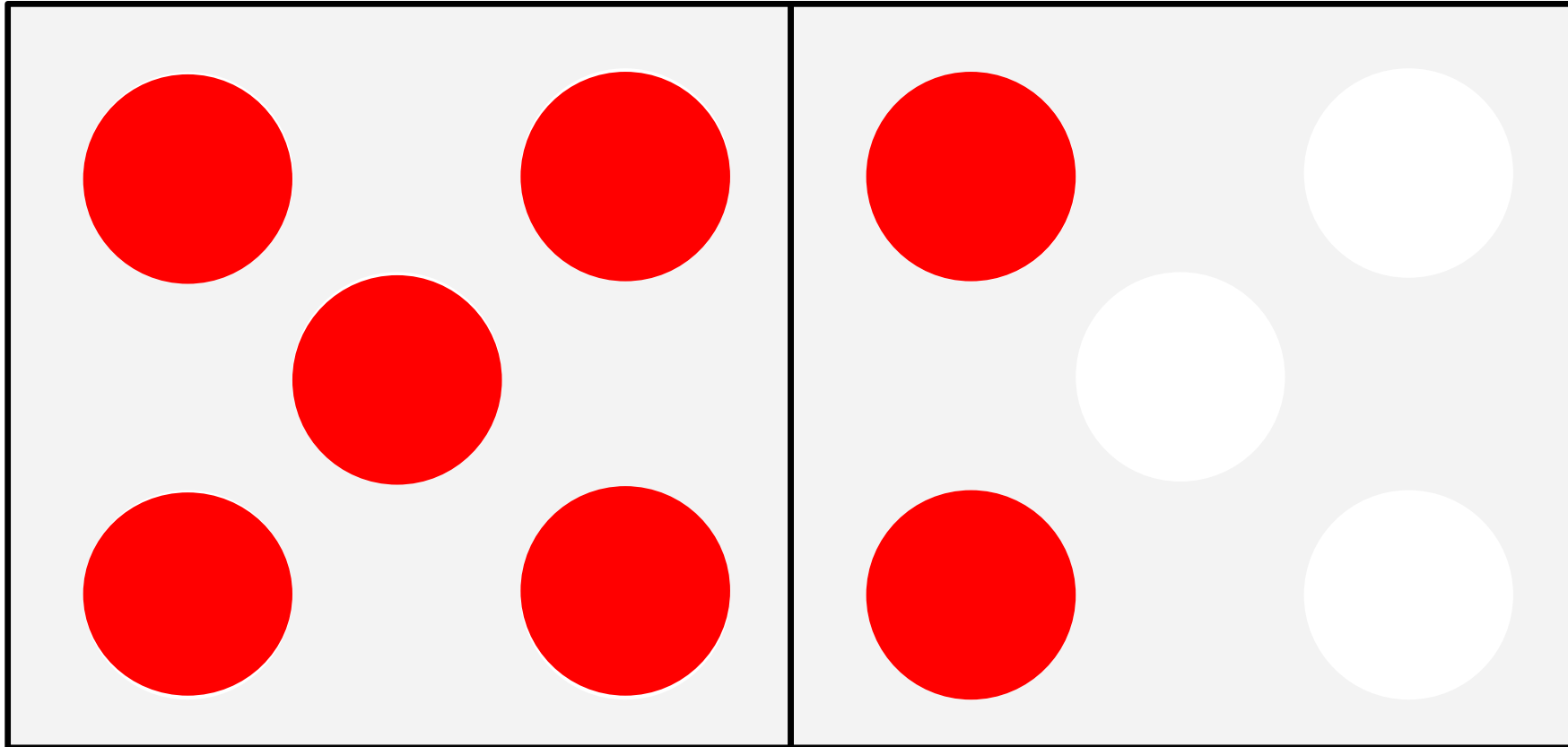
5 needs \_\_\_\_ to make \_\_\_\_ .



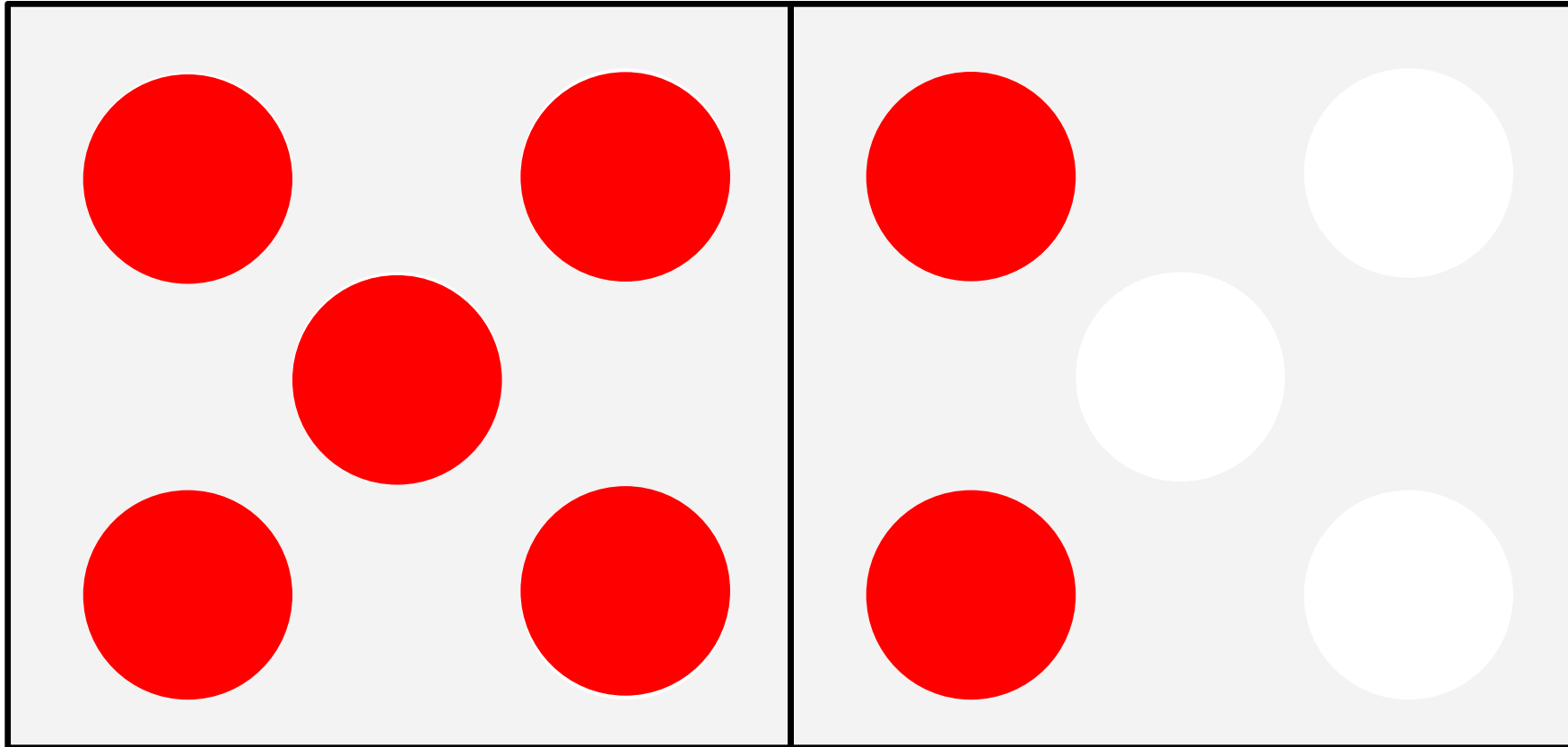


5 needs \_\_\_\_ to make \_\_\_\_ .

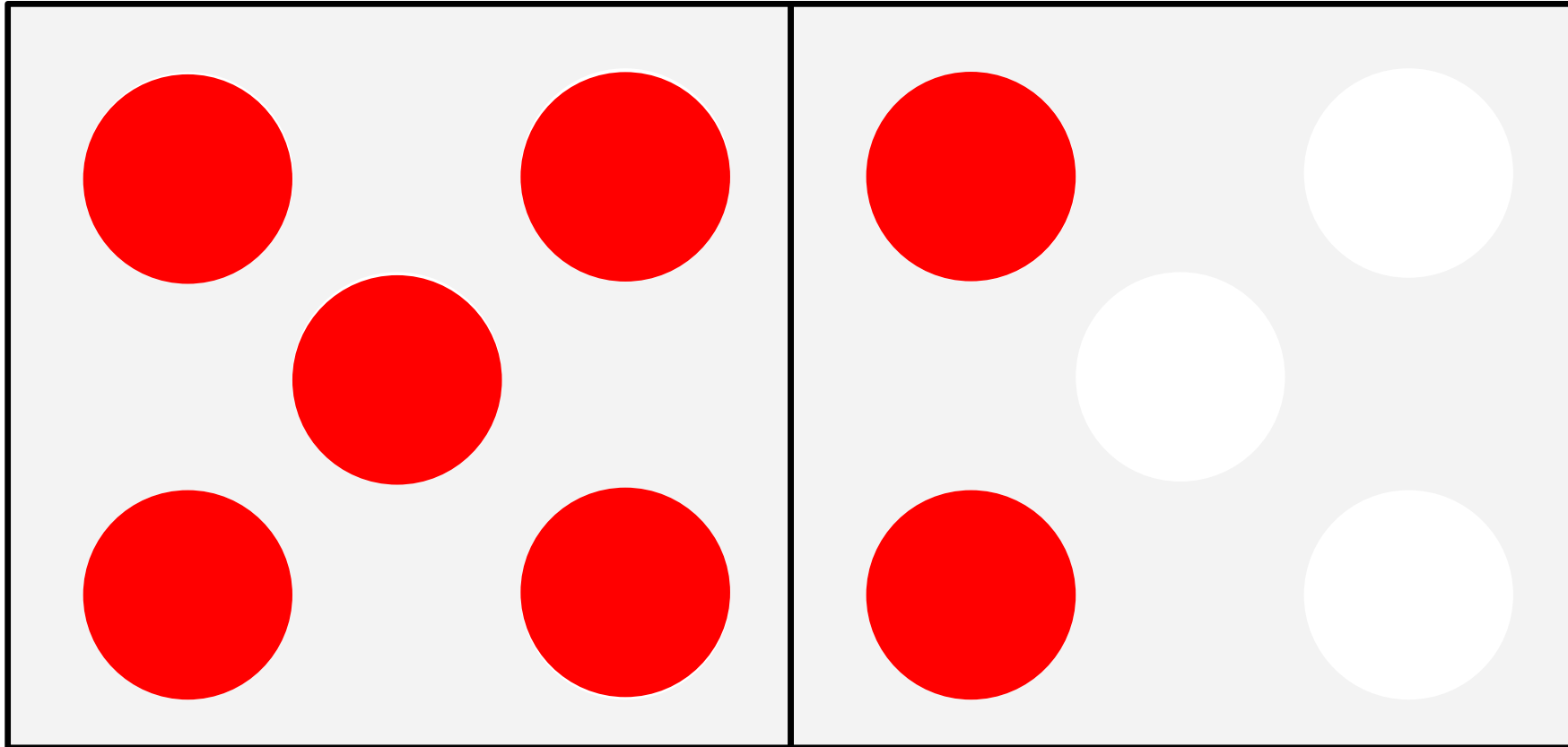
Use your rekenrek to make the number shown. Then make 7.



\_\_\_ needs \_\_\_ to make 7;  
\_\_\_ and \_\_\_ make 7.

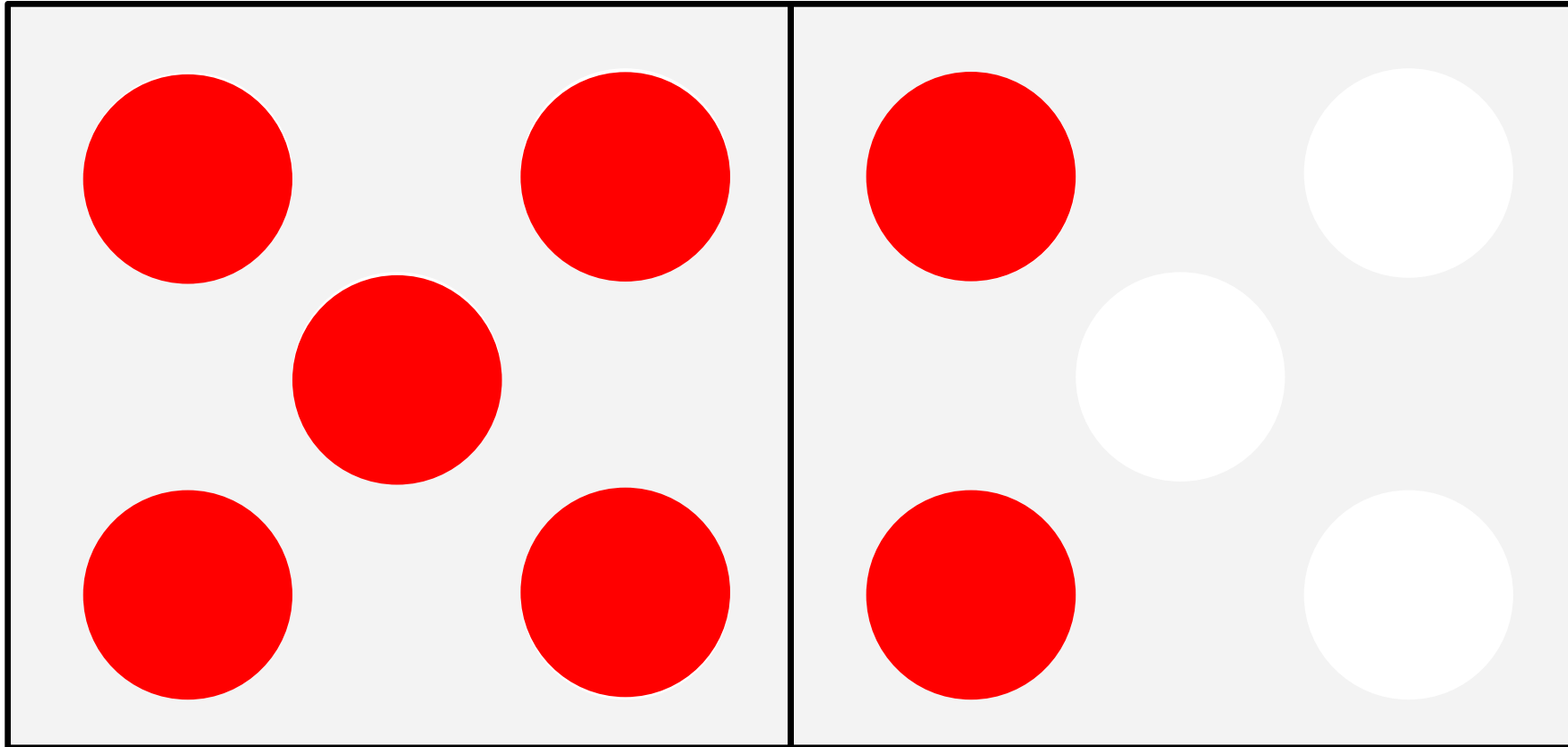


\_\_\_ needs \_\_\_ to make 7;  
\_\_\_ and \_\_\_ make 7.

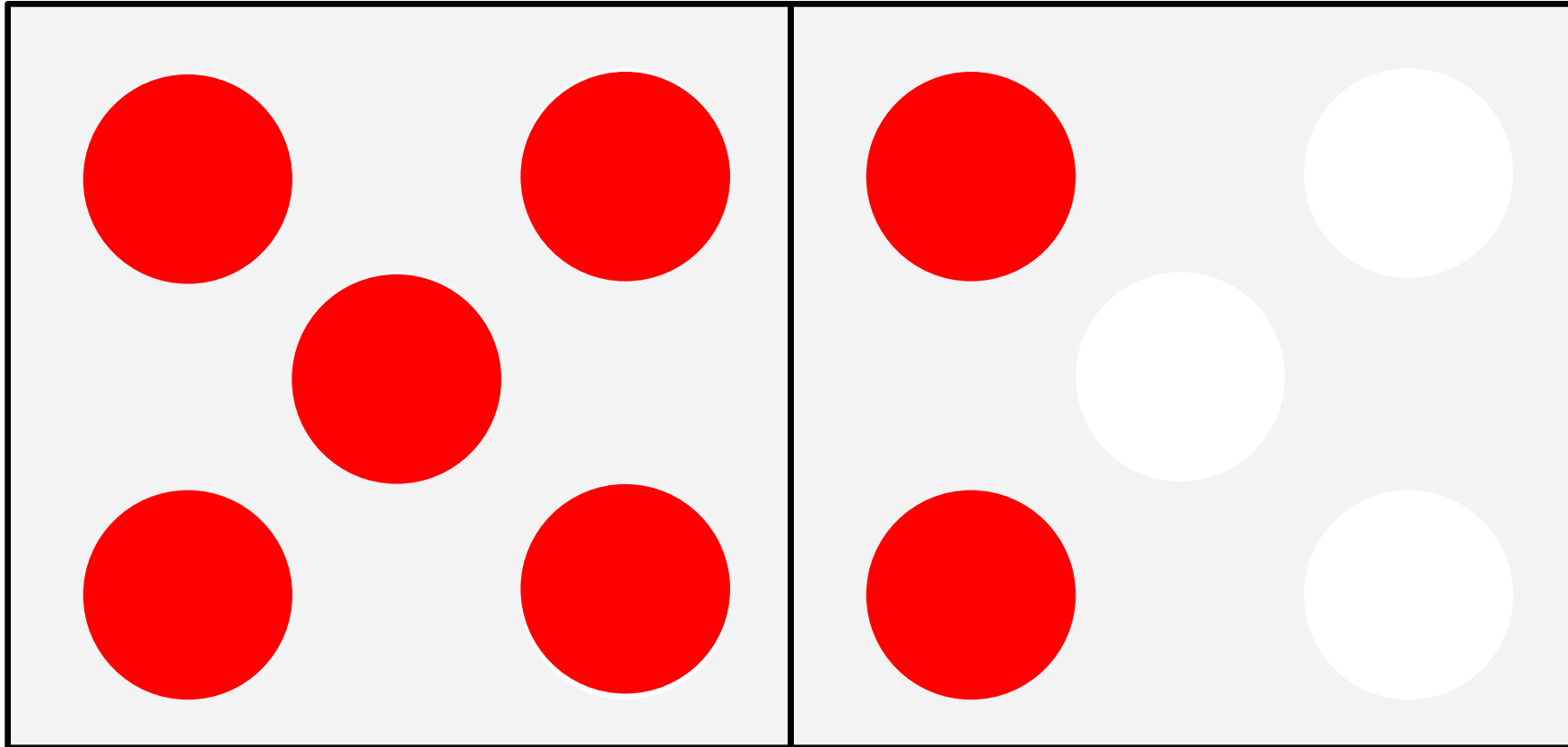


\_\_\_ needs \_\_\_ to make 7;  
\_\_\_ and \_\_\_ make 7.



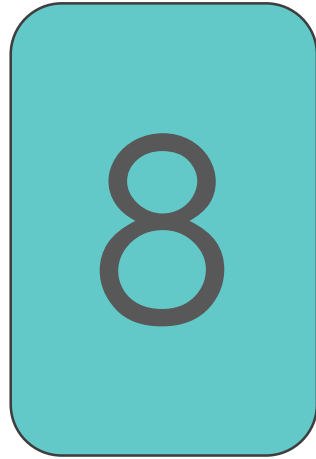


\_\_\_ needs \_\_\_ to make 7;  
\_\_\_ and \_\_\_ make 7.



\_\_\_ needs \_\_\_ to make 7;  
\_\_\_ and \_\_\_ make 7.

8 # 9



$$5 + \boxed{1} = 6$$

$$\boxed{1} + 5 = 6$$

$$5 + \boxed{2} = 7$$

$$\boxed{2} + 5 = 7$$

$$5 + \boxed{3} = 8$$

$$\boxed{3} + 5 = 8$$

$$5 + \boxed{4} = 9$$

$$\boxed{4} + 5 = 9$$

# Number Sense Times Tables – Years 3 and 4 and some children in Years 5 and 6.

Concept lesson – Pictorial representations of the times tables

Display

Testing and chanting

End of unit concept lesson

Targeted support

$2 \times 2 = 4$

$3 \times 2 = 6$

$3 \times 3 = 9$

$4 \times 2 = 8$

$4 \times 3 = 12$

$4 \times 4 = 16$

$5 \times 2 = 10$

$5 \times 3 = 15$

$5 \times 4 = 20$

$5 \times 5 = 25$

$6 \times 2 = 12$

$6 \times 3 = 18$

$6 \times 4 = 24$

$6 \times 5 = 30$

$6 \times 6 = 36$

$7 \times 2 = 14$

$7 \times 3 = 21$

$7 \times 4 = 28$

$7 \times 5 = 35$

$7 \times 6 = 42$

$7 \times 7 = 49$

$8 \times 2 = 16$

$8 \times 3 = 24$

$8 \times 4 = 32$

$8 \times 5 = 40$

$8 \times 6 = 48$

$8 \times 7 = 56$

$8 \times 8 = 64$

$9 \times 2 = 18$

$9 \times 3 = 27$

$9 \times 4 = 36$

$9 \times 5 = 45$

$9 \times 6 = 54$

$9 \times 7 = 63$

$9 \times 8 = 72$

$9 \times 9 = 81$

$2 \times 2 = 4$

$3 \times 2 = 6$

$3 \times 3 = 9$

$4 \times 2 = 8$

$4 \times 3 = 12$

$4 \times 4 = 16$

$5 \times 2 = 10$

$5 \times 3 = 15$

$5 \times 4 = 20$

$5 \times 5 = 25$

$6 \times 2 = 12$

$6 \times 3 = 18$

$6 \times 4 = 24$

$6 \times 5 = 30$

$6 \times 6 = 36$

$7 \times 2 = 14$

$7 \times 3 = 21$

$7 \times 4 = 28$

$7 \times 5 = 35$

$7 \times 6 = 42$

$7 \times 7 = 49$

$8 \times 2 = 16$

$8 \times 3 = 24$

$8 \times 4 = 32$

$8 \times 5 = 40$

$8 \times 6 = 48$

$8 \times 7 = 56$

$8 \times 8 = 64$

$9 \times 2 = 18$

$9 \times 3 = 27$

$9 \times 4 = 36$

$9 \times 5 = 45$

$9 \times 6 = 54$

$9 \times 7 = 63$

$9 \times 8 = 72$

$9 \times 9 = 81$

Our 36 times tables facts

21

facts learned so far

15

facts to go

Facts we  
are learning

$4 \times 3 = 12$

$6 \times 3 = 18$

$7 \times 3 = 21$

$8 \times 3 = 24$

$9 \times 3 = 27$

# Concept Lesson





# Testing and Chanting

2 minute test of 40 questions.

Marked as a group, chanting as we go.

Children learn very quickly how to chant, what they say is not what is on the paper!

$$3 \times 4 = 12$$

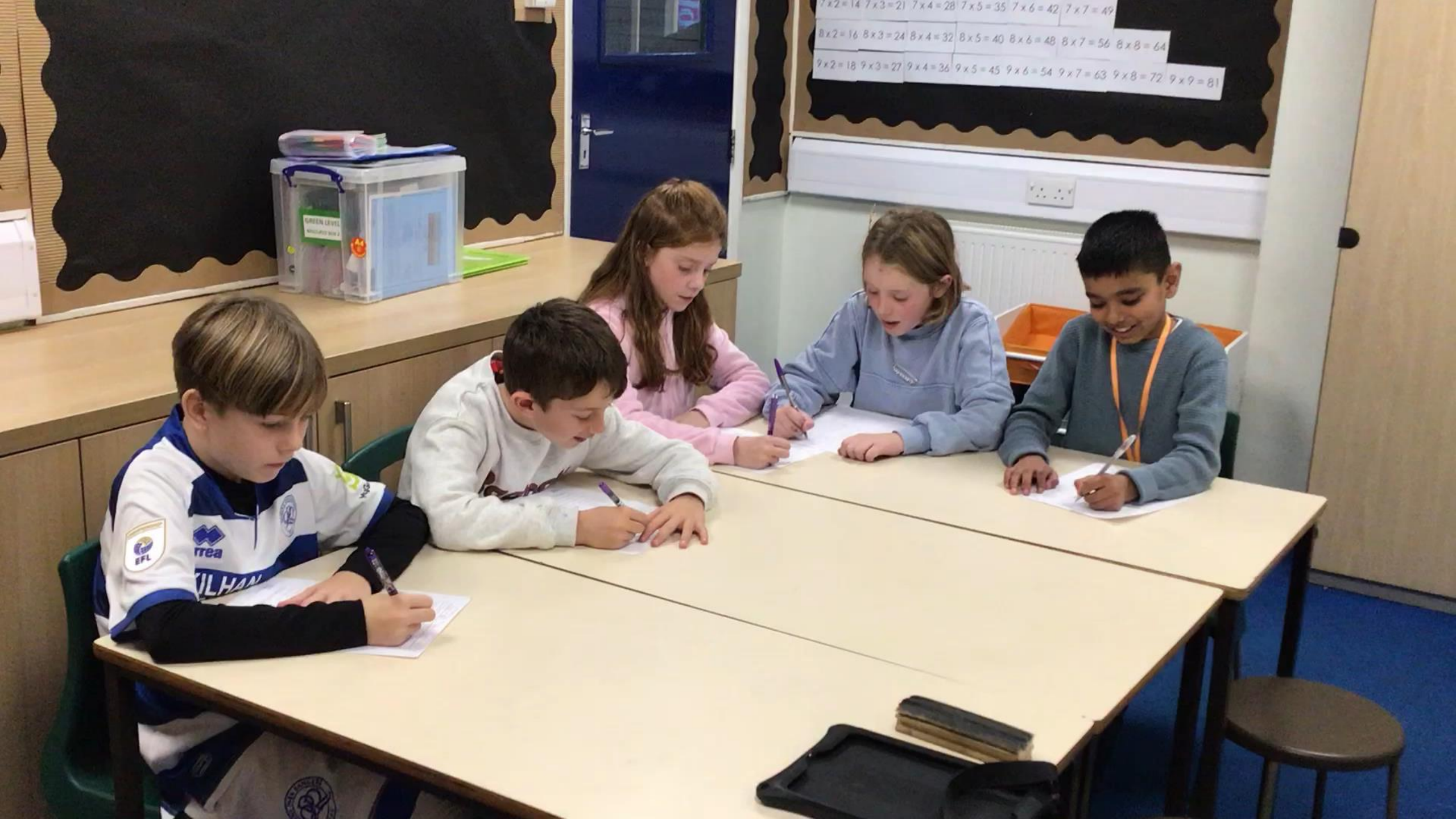
$$4 \times 3 = 12$$

$$12 \div 4 = 3$$

$$12 \div 3 = 4$$

For all these fact the children will say 'four threes are 12.'

$4 \times 3 = \underline{\quad}$	$4 \times 4 = \underline{\quad}$
$2 \times 3 = \underline{\quad}$	$7 \times 5 = \underline{\quad}$
$3 \times 3 = \underline{\quad}$	$30 \div 5 = \underline{\quad}$
$18 \div 3 = \underline{\quad}$	$8 \times 5 = \underline{\quad}$
$2 \times 3 = \underline{\quad}$	$5 \times 5 = \underline{\quad}$
$3 \times 5 = \underline{\quad}$	$4 \times 3 = \underline{\quad}$
$3 \times 2 = \underline{\quad}$	$4 \times 5 = \underline{\quad}$
$6 \times 3 = \underline{\quad}$	$8 \times 8 = \underline{\quad}$
$3 \times 4 = \underline{\quad}$	$18 \div 3 = \underline{\quad}$
$12 \div 3 = \underline{\quad}$	$3 \times 5 = \underline{\quad}$
$2 \times 3 = \underline{\quad}$	$81 \div 9 = \underline{\quad}$
$3 \times 6 = \underline{\quad}$	$6 \times 6 = \underline{\quad}$



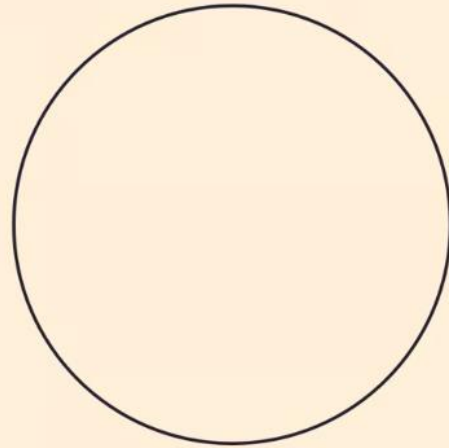
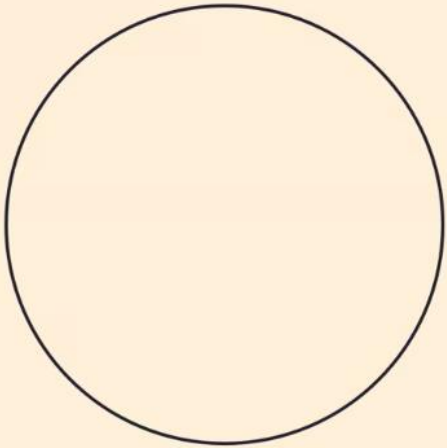
$7 \times 2 = 14$	$7 \times 3 = 21$	$7 \times 4 = 28$	$7 \times 5 = 35$	$7 \times 6 = 42$	$7 \times 7 = 49$		
$8 \times 2 = 16$	$8 \times 3 = 24$	$8 \times 4 = 32$	$8 \times 5 = 40$	$8 \times 6 = 48$	$8 \times 7 = 56$	$8 \times 8 = 64$	
$9 \times 2 = 18$	$9 \times 3 = 27$	$9 \times 4 = 36$	$9 \times 5 = 45$	$9 \times 6 = 54$	$9 \times 7 = 63$	$9 \times 8 = 72$	$9 \times 9 = 81$

# End of unit lesson

Square number

49

Not a square number

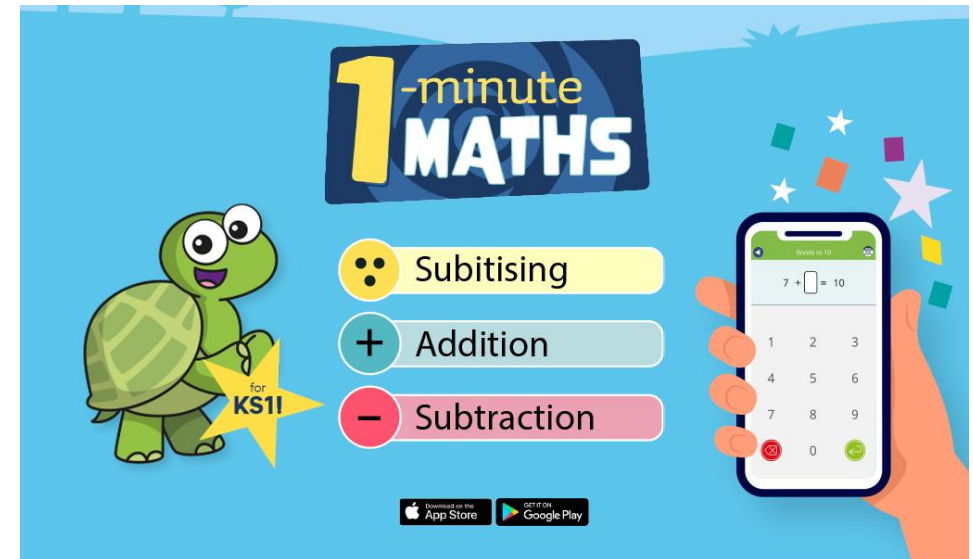
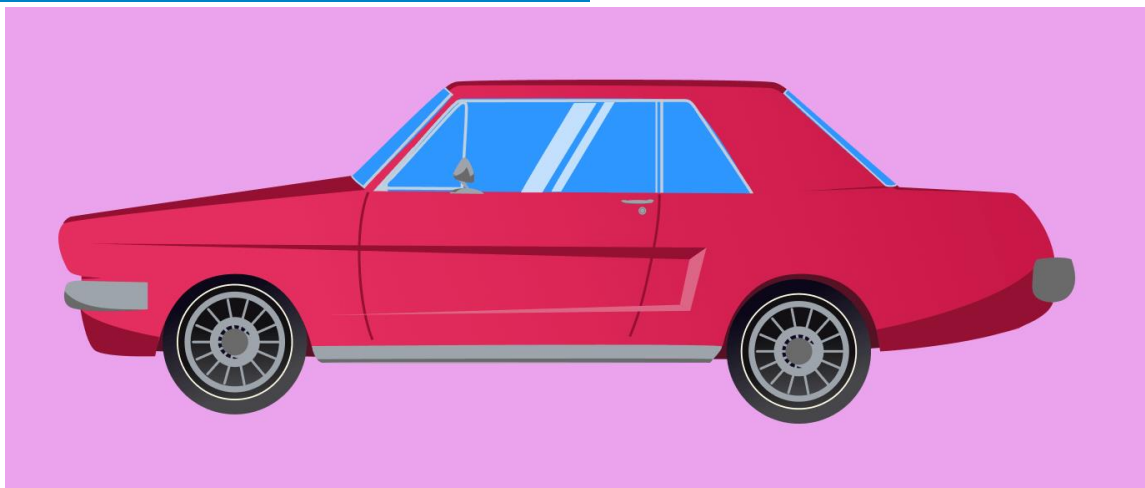
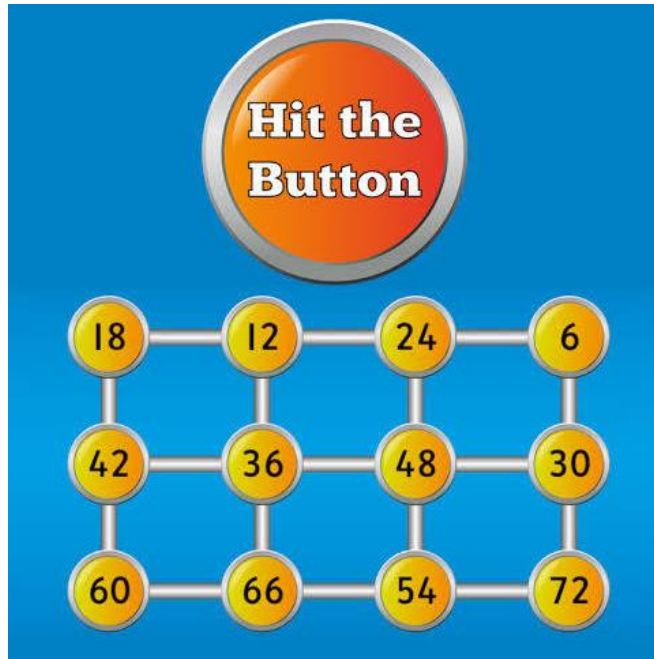


How many can you see?

$$4 \times 4 = 16$$

16 balls

# What can parents do to help?



# Fluency in Years 5 and 6

FINAL

## MENTAL AGILITY TEST 3

TIME: 5 SECONDS

1	
2	$\frac{1}{2}$
3	
4	
5	120

TIME: 10 SECONDS

6		11	3,420
7	$\frac{35}{8}$	12	$23 \times 17 = 391$
8	1,859	13	
9		14	
10	280	15	2,800

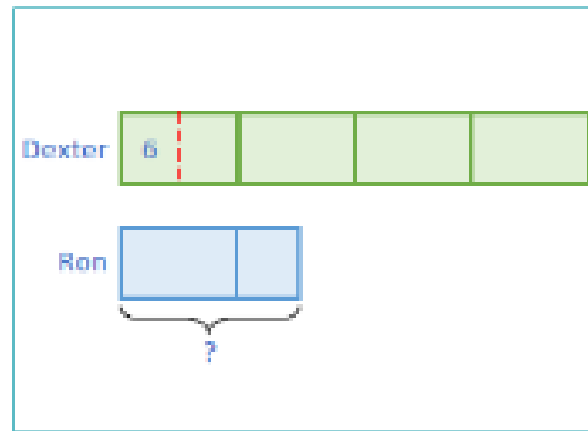
Mon 6<sup>th</sup> Nov

BARVEMBER 2023

3 Dexter has 4 times as many toys as Ron.

- He gives  $\frac{3}{4}$  of his toys to charity.
- He gives  $\frac{1}{2}$  of his remaining toys to Ron.
- Dexter has 6 toys left.

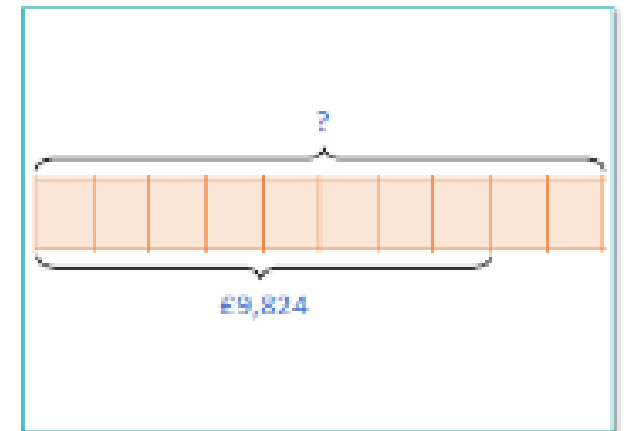
How many toys does Ron have now?



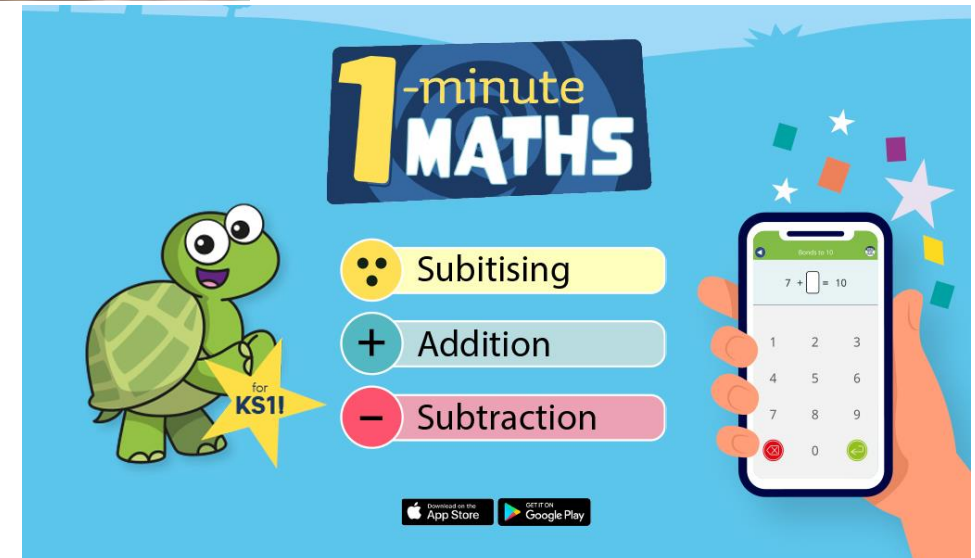
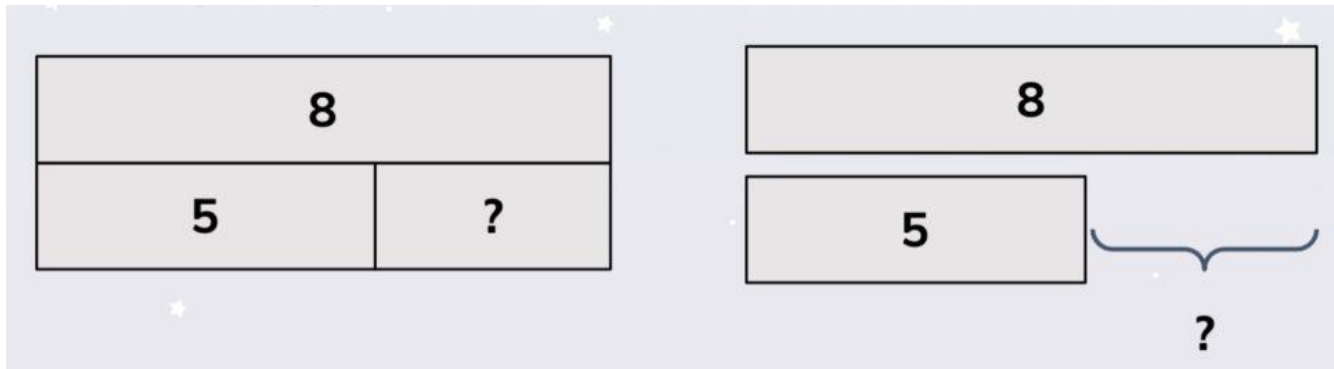
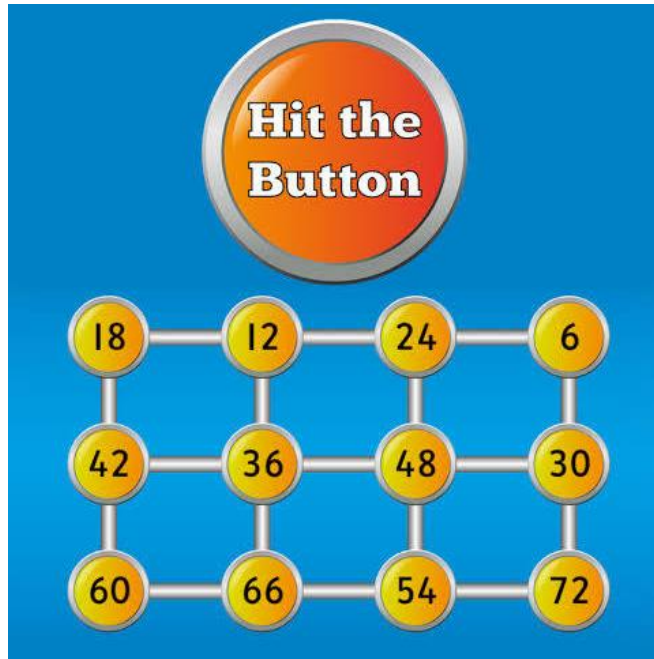
4 In a sale, the cost of cars is reduced by 20%



The cost of the car in the sale is £9,824  
How much did the car cost before the sale?



# What can parents do to help?



# Fluency Homework

KS1 – Numbots. 15 minutes is set weekly. Encourage your child to complete in small steps. Be aware of timings. This can be checked on your child's profile under game data.

KS2 'Tough ten' suitable for their ability. 3 sets a weekly  
Please set a 2 minute timer and see what they can do in 2 minutes. Please look over it with them so they know what they need to try and 'beat' next time. Monitored by teachers.

Please do not do all 3 'Tough tens' in one night.

