

Tuesday 7<sup>th</sup> November 2017

# Maths

## Parent Information Session



Mr Mordue & Mr Taylor  
Maths Leaders

# Aims

- Provide you with a greater understanding of how Maths is taught in our school.
- Show you the progression of calculation methods through KS1 and KS2.
- Enable you to see the types of different questions children are asked.
- Help you understand how you can help your child at home with their Maths.

# Maths in KS1



Mr Mordue

# Contents

- The 4 operations - including calculation methods used and progression through the key stage
- Mental arithmetic: Number bonds, times tables and mental strategies
- Problem solving / Using and Applying
- How you can help at home

# KS1: The Basics

- Recognise, read and write numbers:

Three

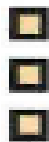


3

# KS1: The Basics

- Understand place value:

1 ten 3 ones

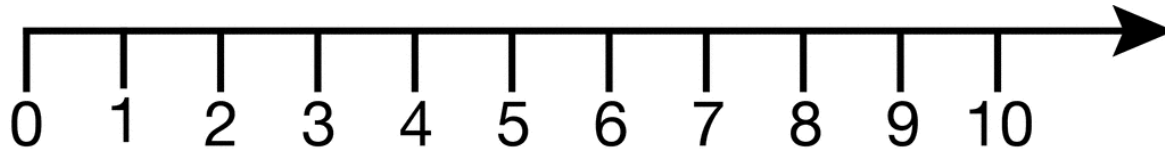


13 thirteen

H	T	U

# KS1: The Basics

- Put numbers in order:



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

# KS1: The Basics

- Count forwards and backwards in same size steps



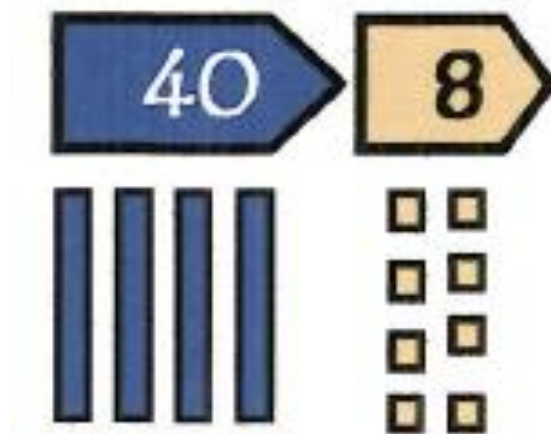
A horizontal chart titled "Counting in Twos" with a green background and yellow text. The title is flanked by two small green cartoon turtles. Below the title is a row of ten boxes containing the numbers 2, 4, 6, 8, 10, 12, 14, 16, 18, and 20, illustrating the sequence of counting in twos.

Counting in Twos									
2	4	6	8	10	12	14	16	18	20



# KS1: The Basics

- Partition a number and recombine it



# KS1 Calculation Methods



The 4 operations

## Addition - Practical resources

- Dienes blocks
- Counters/multi-link cubes
- Toys



$$4 + 3 = 7$$

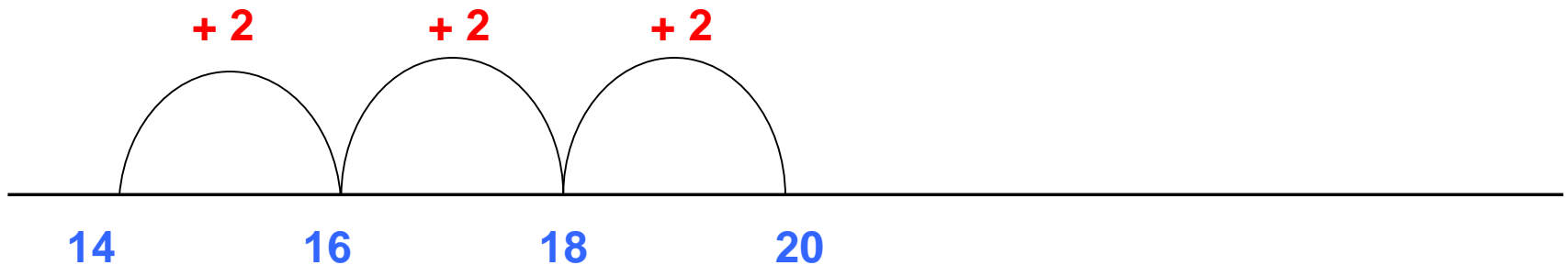
# Addition - Practical resources

- 100 square
- $23 + 5 = 28$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

## Addition - Practical resources

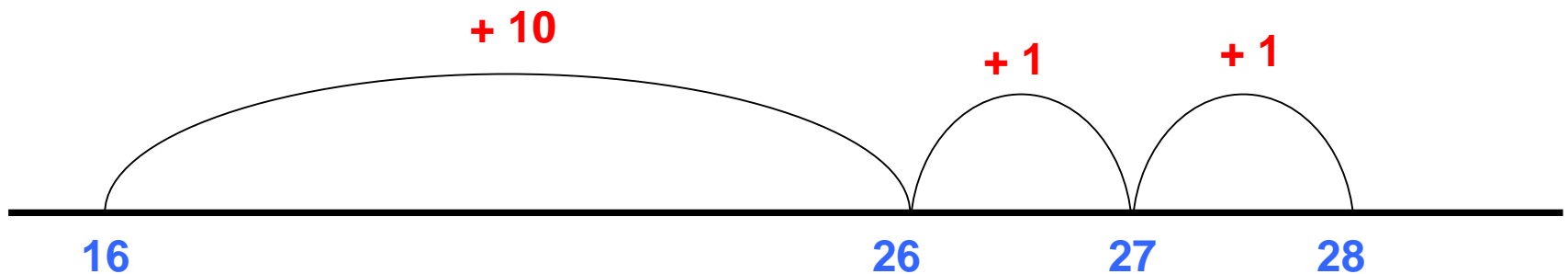
- Number line: Starting with single 'jumps' and then moving onto jumps of 2, 5, 10



$$14 + 6 = 20$$

## Addition - Partitioning for 2 digit + 2 digit

- Number Line       $16 + 12 = 28$   
 $12$  is partitioned into T + U  
 $12 = 10 + 2$



## Addition - Written Methods

- Partitioning
- Partitioning means splitting the number into the tens and units. It is **essential** that their place value is **secure**.

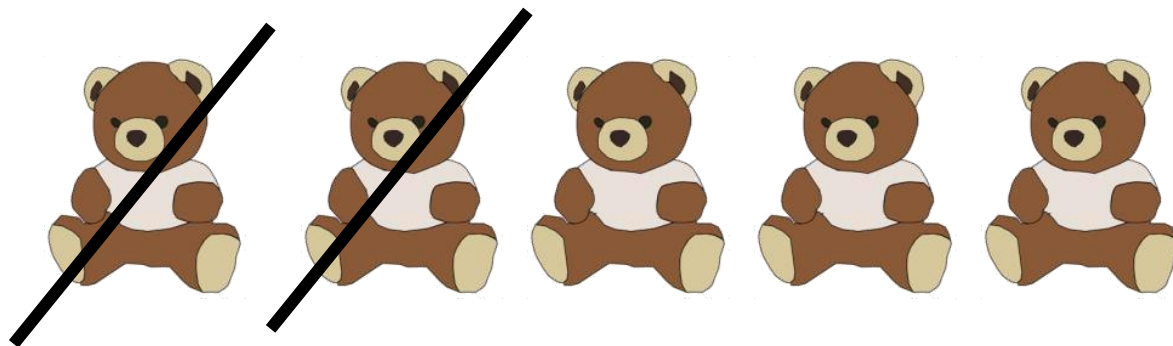
$$\begin{array}{rcl} 56 + 32 = & 50 + 30 = 80 & \text{(partition tens)} \\ & 6 + 2 = 8 & \text{(partition units)} \end{array}$$

$$80 + 8 = 88 \quad \begin{array}{l} \text{(add tens and} \\ \text{units answer} \\ \text{together)} \end{array}$$

## Subtraction - Practical Resources

- Dienes blocks
- Counters
- Toys
- Pebbles

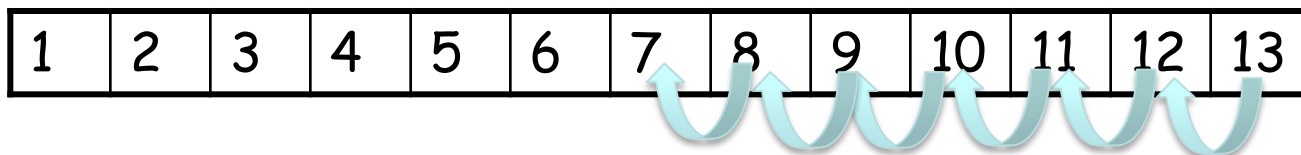
$$5 - 2 = 3$$





## Subtraction - Practical Resources

- Number line
- $13 - 6 = 7$

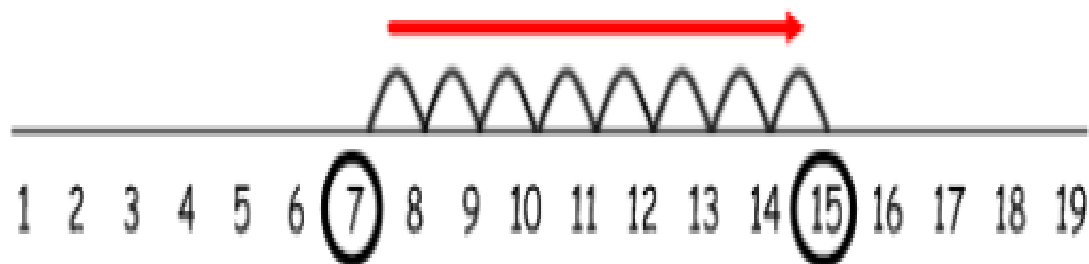


## Subtraction - Practical Resources

- 100 square
- $38 - 5 = 33$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

## Subtraction - Finding the difference

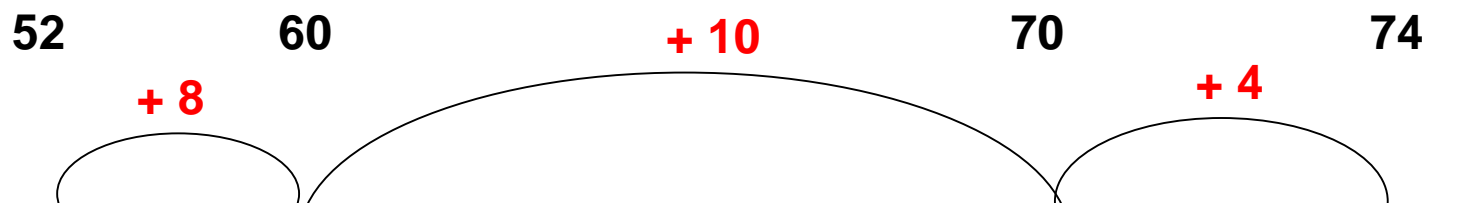


$$15 - 7 = 8$$

## Subtraction - Counting On

### Finding the difference

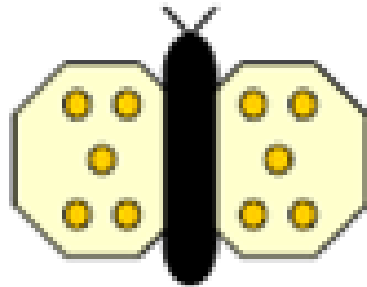
- Count on from the smallest to the largest once again bridging through ten or a multiple of ten.



$$\begin{aligned} 74 - 52 &= 8 + 10 + 4 \\ &= 22 \end{aligned}$$

## Multiplication - Doubling

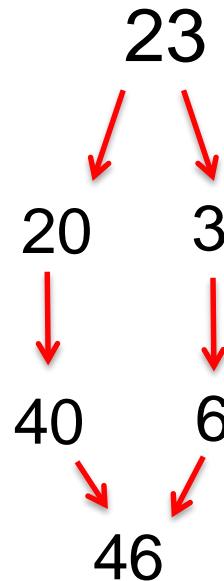
$$5 + 5 = 10$$



## Multiplication - Doubling

Moving onto partitioning to double numbers

Double 23 = 46



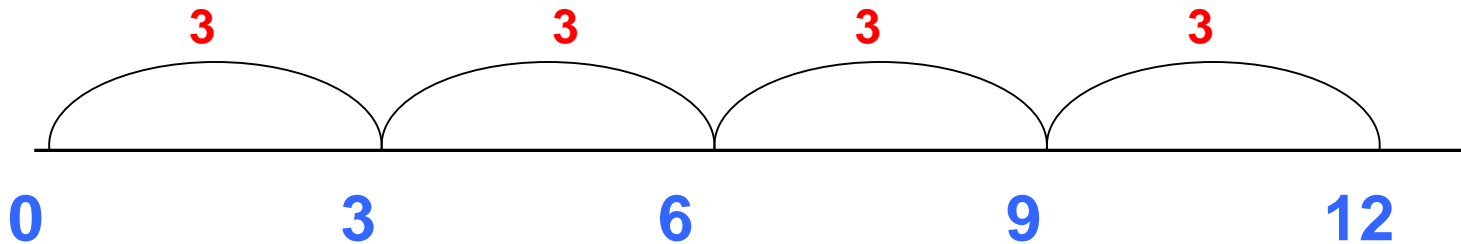
# Multiplication - Practical Resources/Repeated Addition

$$3 \times 5 = (3 \text{ groups of } 5) = 5 + 5 + 5 = 15$$



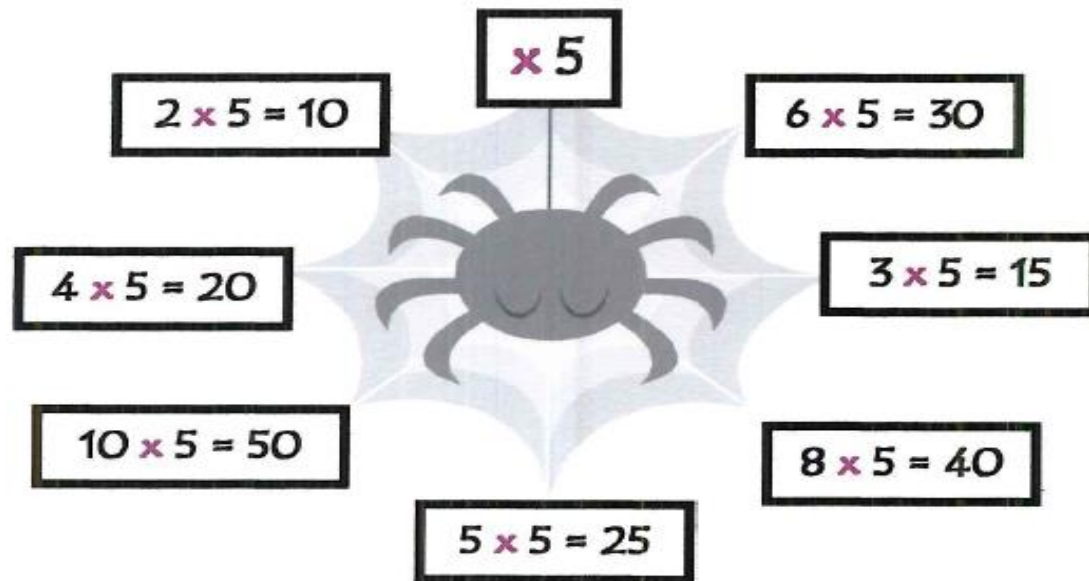
## Multiplication - Number lines/100 square

- Children use the number line and the idea of repeated addition to count in groups.
- $4 \times 3 = 12$

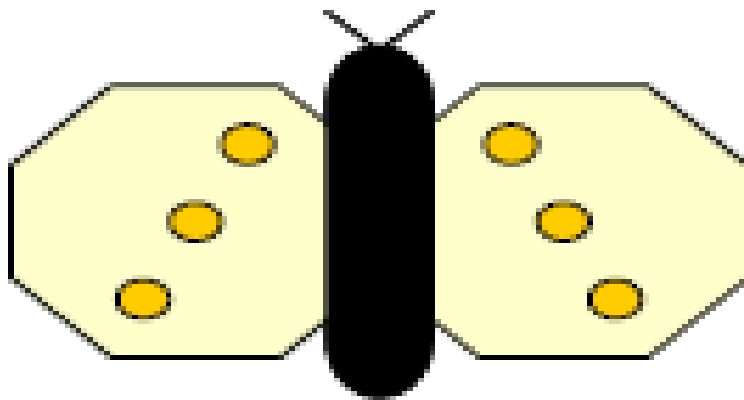




# Multiplication - Times Tables



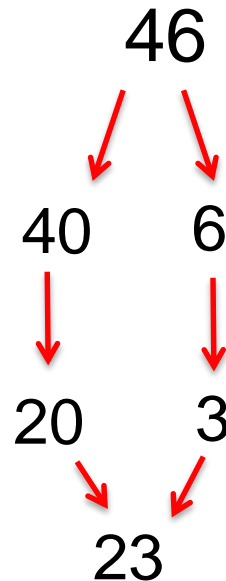
## Division – Halving



## Division - Halving

Moving onto partitioning to halve numbers

Halve 46 = 23



## Division - Practical Resources - Sharing

$$15 \div 3 = 15 \text{ 'shared between' } 3 = 5$$



## Division - Grouping

The number **in** the group is known but how many groups is unknown.

How many 3s in 12?



We need to count the number of groups.

## Division - Corresponding times table facts

From here we get the children to use their times tables knowledge to work out the **inverse operation...**

$$20 \div 5 = 4$$

Children need to use their knowledge of 5 times table to use the corresponding fact...

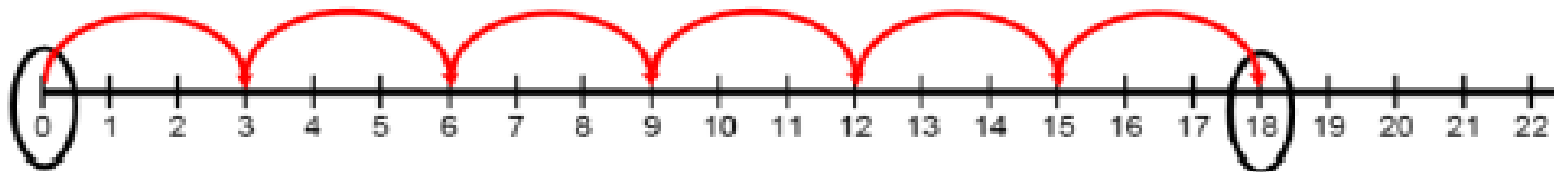
$$4 \times 5 = 20 \text{ so } 20 \div 5 = 4$$

## Division – Number line

18 into groups of 3 = 6 groups

18 into jumps of 3 = 6 jumps

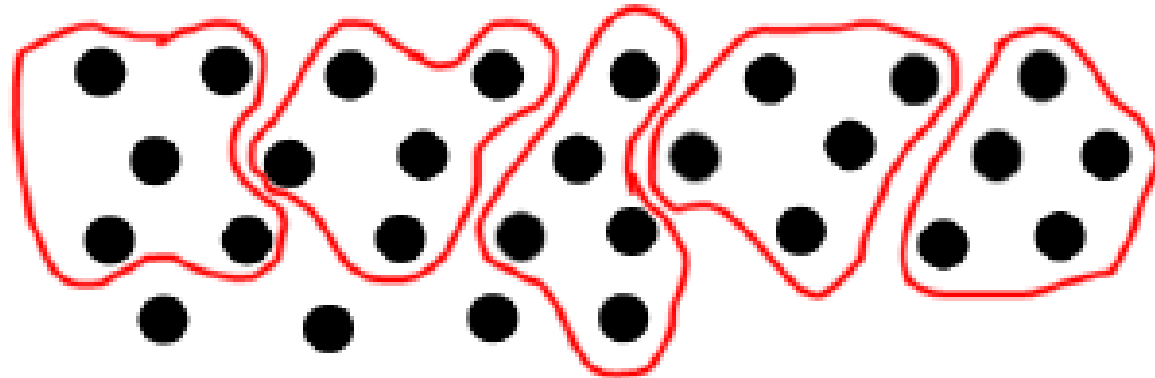
$$18 \div 3 = 6$$



## Division - with remainders

28 children **into groups of 5**  
How many children left without a group?

$$28 \div 5 = 5 \text{ r } 3$$





# Using and Applying

- Understanding mathematical vocabulary
- Applying strategies taught
- Reasoning and explaining answers

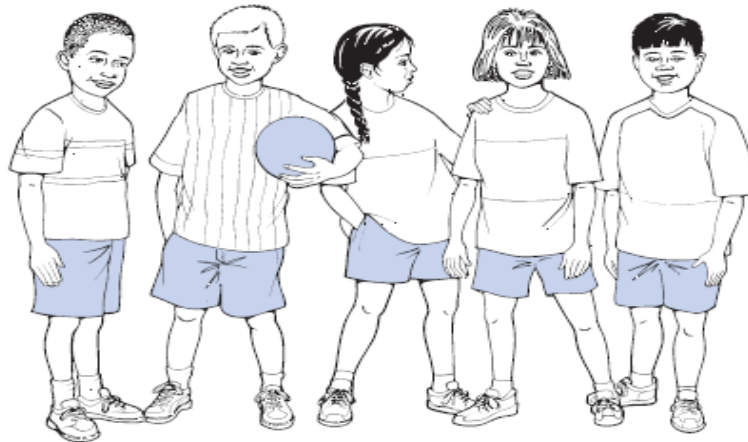
# Using and Applying

<p><b>Missing numbers</b>  <math>10 = 5 \times \square</math>            What number could be written in the box?</p> <p><b>Making links</b>            I have 30p in my pocket in 5p coins. How many coins do I have?</p>	<p><b>Missing numbers</b>  <math>24 = \square \times \square</math>            Which pairs of numbers could be written in the boxes?</p> <p><b>Making links</b> Cards come in packs of 4. How many packs do I need to buy to get 32 cards?</p>	<p><b>Missing numbers</b>  <math>72 = \square \times \square</math>            Which pairs of numbers could be written in the boxes?</p> <p><b>Making links</b> Eggs are bought in boxes of 12. I need 140 eggs; how many boxes will I need to buy?</p>	<p><b>Missing numbers</b>  <math>6 \times 0.9 = \square \times 0.03</math>  <math>6 \times 0.04 = 0.008 \times \square</math>            Which numbers could be written in the boxes?</p> <p><b>Making links</b> Apples weigh about 170 g each. How many apples would you expect to get in a 2 kg bag?</p>	<p><b>Missing numbers</b>  <math>2.4 \div 0.3 = \square \times 1.25</math>            Which number could be written in the box?</p> <p><b>Making links</b></p>
--	--	---	--	--

# Using and Applying

There are **35** children.

They get into teams of **5**



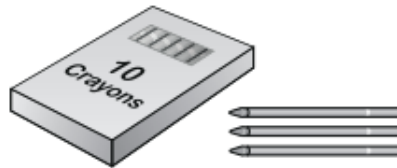
How many teams are there altogether?

teams

# Using and Applying

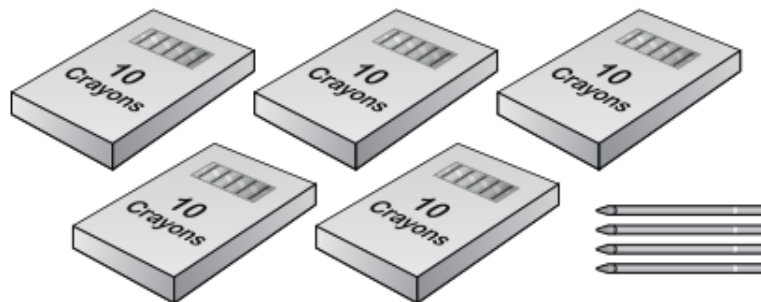
13

Ben has 13 crayons.



Here are Abdul's crayons.

How many crayons does Abdul have?



crayons

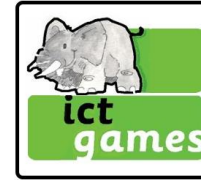
# How you can help at home

- Lots of practice - in the car, online games, counting objects at home
- Playing games - cards, snakes and ladders, dominoes
- Cooking for measurements
- Telling the time

# KS1 Online Help



Maths Games  
[www.maths-games.org](http://www.maths-games.org)



ICT Games  
[www.ictgames.com](http://www.ictgames.com)



Maths Bingo  
[www.abcya.com](http://www.abcya.com)



Crickweb  
[www.crickweb.co.uk](http://www.crickweb.co.uk)



Numberjacks  
Video clips and  
Songs  
[www.youtube.com](http://www.youtube.com)



Top Marks  
[www.topmarks.co.uk](http://www.topmarks.co.uk)