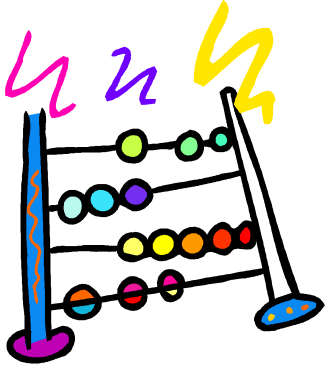




AVANTI HOUSE

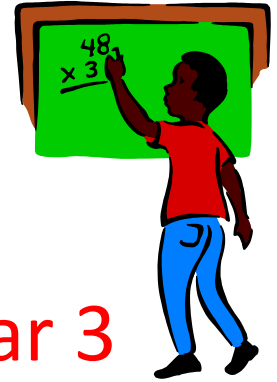
EXCELLENCE · VIRTUE · DEVOTION



# Yr3 Mathematics

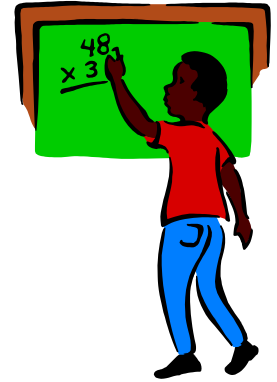
# Parent Workshop

# Contents



- The New Curriculum – what's new in Year 3 and 4
- The 4 operations – including methods used and progression throughout the phase.
- Mental Maths
- How you can help at home.
  - Online applications

# What's new?

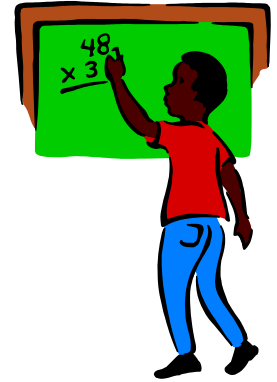


- Focus on various topics
- each term
- Increased focus on number
- Roman numerals to 100
- Multiplying fractions
- Less focus on 'statistics'
- Larger numbers

High expectations  
are the key to  
everything.

Sam Walton

# Times tables

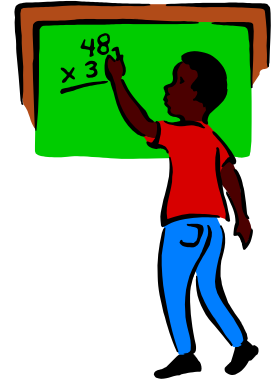


By the end of year 4 pupils should:

- memorise their multiplication tables up to and including the 12 times table
- show precision and fluency in their work
- should read and spell mathematical vocabulary correctly and confidently

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

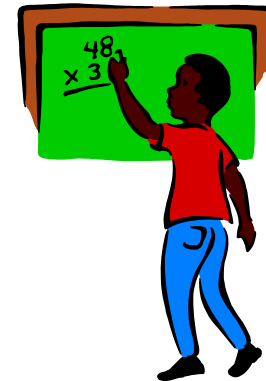
# Calculations



Why so many methods?

Children are entitled to be taught and to acquire secure **mental** methods and efficient **written** methods of calculation for **each operation** which they know they can rely on when mental methods are not appropriate.

We teach them a range so they can choose the one they prefer and proves most accurate for them.

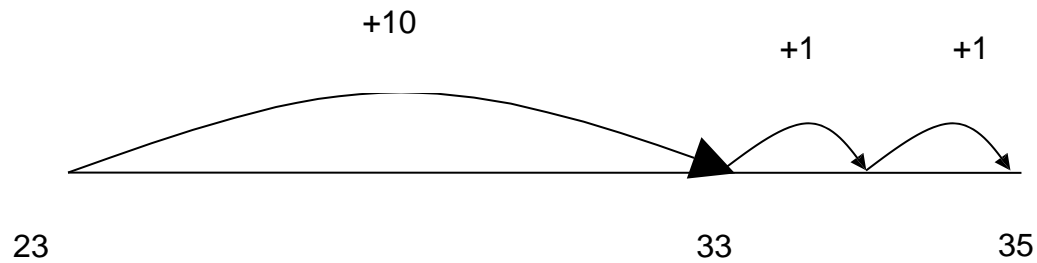


# The Four Operations

# Adding



$$12 + 23 =$$



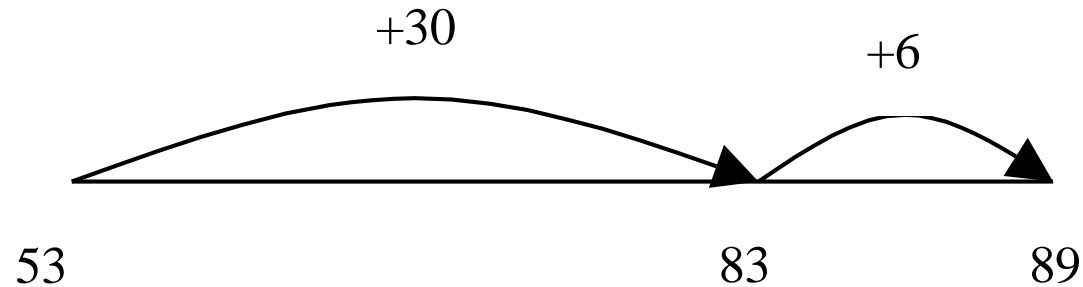
$$\begin{array}{r} 23 + 12 \\ \diagdown \quad \diagup \\ 20 + 10 + 3 + 2 \\ \hline 30 + 5 = 35 \end{array}$$

**Partitioning**

# Adding



$$36 + 53 =$$



$$\begin{aligned} 53 + 36 &= 50 + 30 + 3 + 6 \\ &= 80 + 9 \\ &= 89 \end{aligned}$$

$$\begin{aligned} 53 + 36 &= 53 + 30 + 6 \\ &= 83 + 6 \\ &= 89 \end{aligned}$$



# Adding



$$83 + 42 = 125$$

$$\begin{array}{r} 80 + 3 \\ + 40 + 2 \\ \hline 120 + 5 \end{array}$$

move to

$$\begin{array}{r} 83 \\ + 42 \\ \hline 5 \\ \hline 120 \\ 125 \end{array}$$

# Adding



$$\begin{array}{r} 358 \\ + 73 \\ \hline 431 \\ \hline \end{array}$$

1 1

So in any class, the same example might be given, but children work it out in different ways, according to their level of understanding.

Choose a method you are unfamiliar with to solve these sums.



1.  $73 + 57$

2.  $153 + 89$

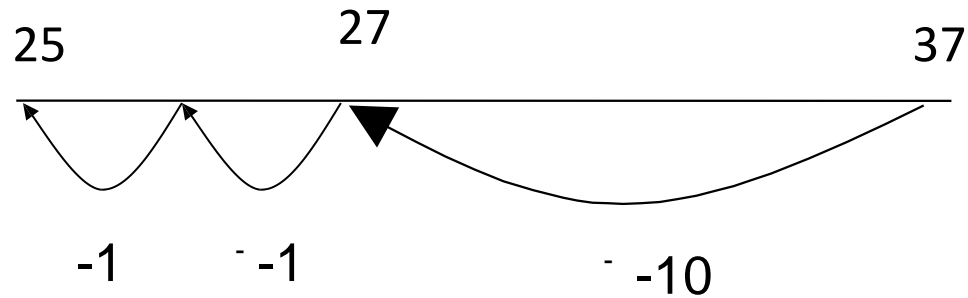
3.  $163 + 144$

4.  $287 + 193$

# Subtracting



$$37 - 12$$

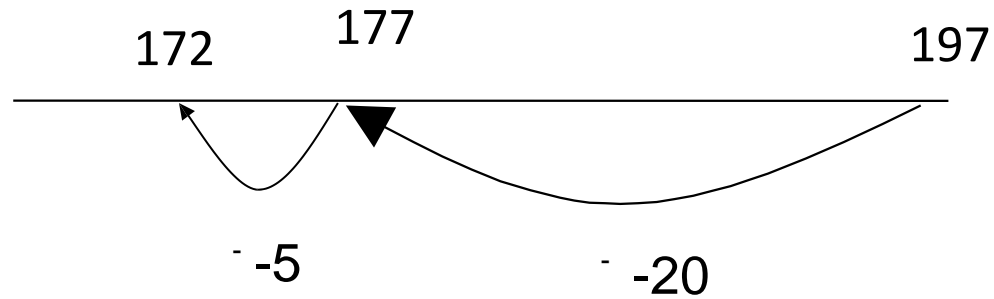


$$\begin{aligned} 37 - 12 &= 37 - 10 - 2 \\ &= 27 - 2 \\ &= 25 \end{aligned}$$

# Subtracting



$$197 - 25 = 172$$



# Subtracting



$$98 - 24 = 74$$

$$\begin{array}{r} 90 + 8 \\ - 20 + 4 \\ \hline 70 + 4 \end{array}$$

# Subtracting



$$\begin{array}{r} \phantom{0}^8 \phantom{0}^1 \\ \phantom{0}9 \phantom{0}2 \\ - \phantom{0}3 \phantom{0}8 \\ \hline \phantom{0}5 \phantom{0}4 \end{array}$$

$$902 - 38 = 864$$

$$\begin{array}{r} 900 + 0 + 2 \\ - \phantom{0}30 + 8 \\ \hline \end{array}$$



$$\begin{array}{r} 800 + 90 + 12 \\ - \phantom{0}30 + 8 \\ \hline 800 + 60 + 4 \end{array}$$

Choose a method you are unfamiliar with to solve these calculations.



1.  $97 - 42$

2.  $183 - 55$

3.  $188 - 54$

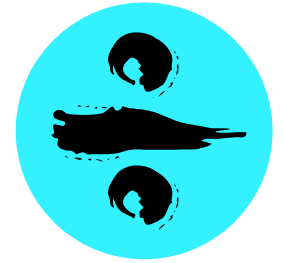
4.  $394 - 131$

5.  $73 - 29$

6.  $194 - 38$



# Dividing

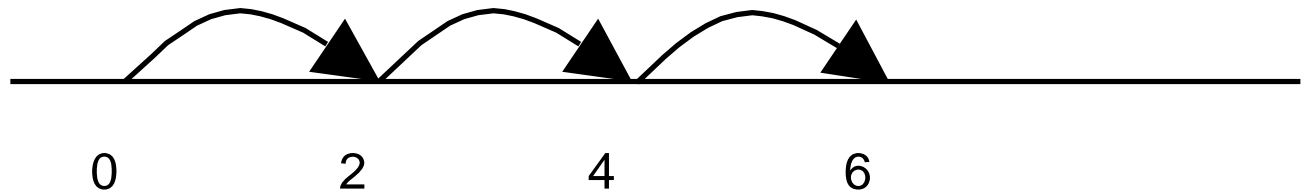


$$6 \div 2 = 3$$

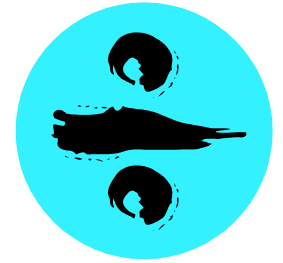
**Sharing** – 6 sweets are shared between 2 people. How many do they have each?



**Grouping** – There are 6 sweets. How many people can have 2 each? (How many 2's make 6?)



# Dividing



With more advanced numbers, e.g.  
dividing by 3 or 4

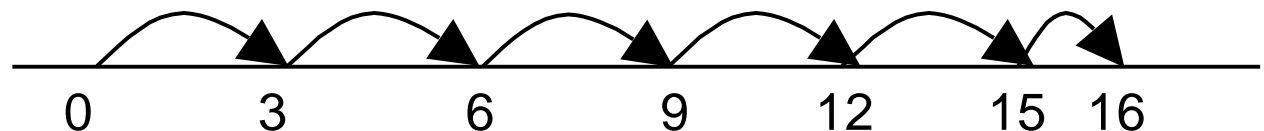
*Remainders*

$$16 \div 3 = 5 \text{ r}1$$

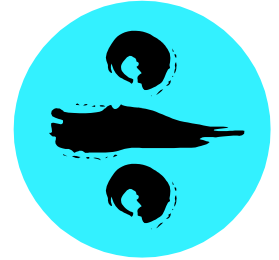
Sharing - 16 shared between 3, how many  
left over?

Grouping - How many 3's make 16, how  
many leftover?

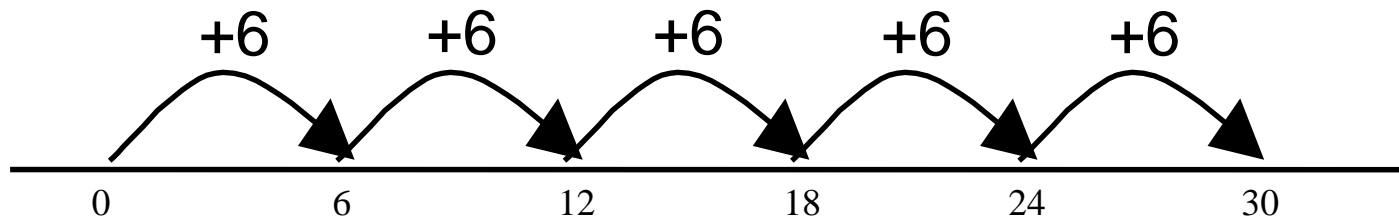
e.g.



# Dividing

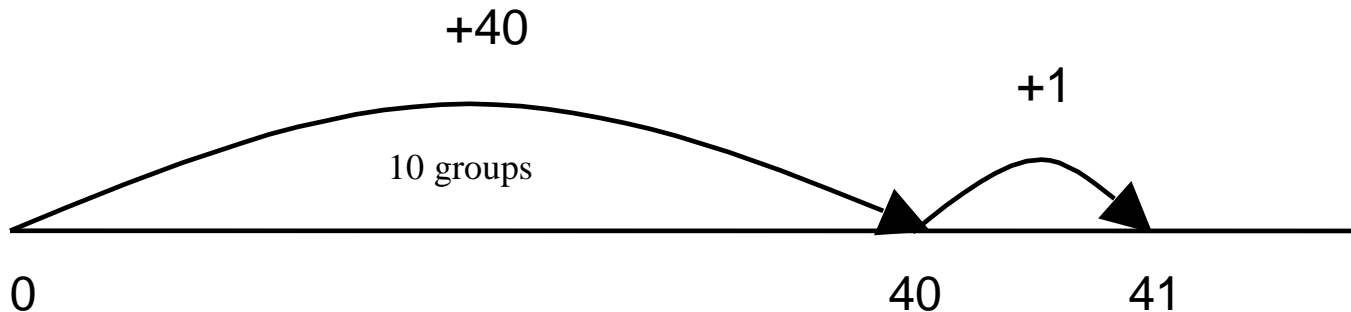


$$30 \div 6 = 5$$

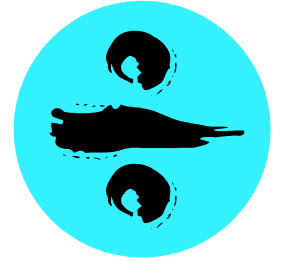


$$41 \div 4 = 10 \text{ r } 1$$

$$\text{or } 41 = (10 \times 4) + 1$$



# Dividing

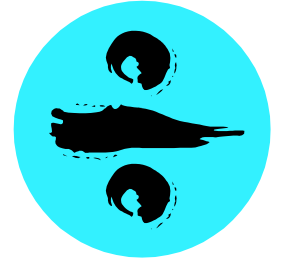


Use 'bus stop' method for division:  
Estimate and check.

$360 \div 8$  is approximately  $400 \div 8 = 50$

$$\begin{array}{r} 45 \\ 8 \overline{) 360} \end{array}$$

Choose a method you are unfamiliar to solve these calculations.



1.  $35 \div 5$

2.  $67 \div 8$

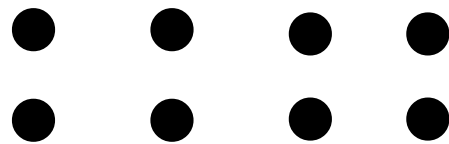
3.  $270 \div 3$

4.  $348 \div 4$

# Multiplying



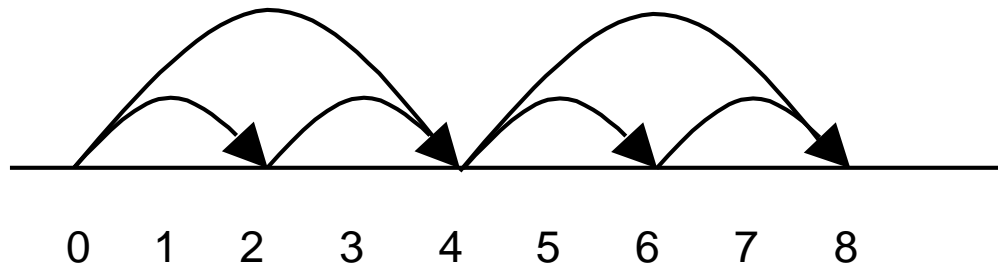
$$2 \times 4$$



$$4 \times 2 \text{ or } 4 + 4$$

or repeated addition:

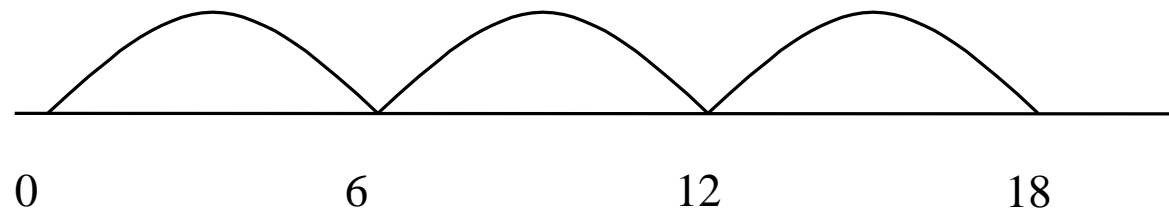
$$2 + 2 + 2 + 2$$



# Multiplying



$$6 \times 3$$



$$35 \times 2 = 70$$

x	30	5
2	60	10

$$60 + 10 = 70$$

# Multiplying



$$23 \times 7 = 161$$

	T	U
x	20	3
7	140	21

$$140 + 21 = 161$$

This method is extended to multiplying a 3 digit number by a single digit



# Multiplying



Still use the grid method to multiply numbers up to 3 digits by a single digit.

Move onto more formal method when appropriate:

Children could record in brackets – e.g. 15 (3 X 5)

Similar to grid method but using vertical recording.

$$125 \times 3$$

$$125X$$

$$\underline{\quad 3}$$

$$15$$

$$60$$

$$\underline{\quad 300}$$

$$\underline{\quad 375}$$



$$125 \times$$

$$\underline{\quad 3}$$

$$\underline{\quad 375}$$

Choose a method you are unfamiliar to solve these calculations.



1.  $89 \times 5$

2.  $274 \times 8$

3.  $285 \times 4$

4.  $317 \times 7$

Thank you for coming.

Any questions?

