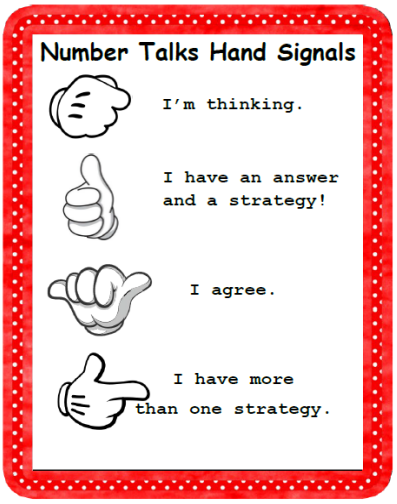
Number Talks @ Alloway Primary: A Parent Guide

Primary 4-7

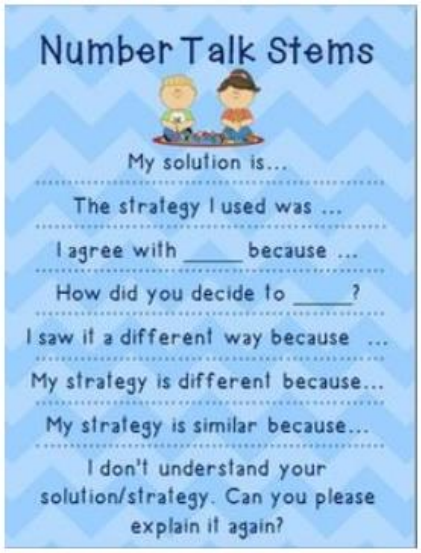
What is a Number Talk?

A number talk is a daily class discussion based on one or more calculations. The teacher will present the problem (e.g. 114 + 75) followed by pupils sharing, not only the answer, but the strategy they used to achieve this answer. Hand signals allow children to show when they are thinking, have an answer and a strategy and have more than one strategy. Some Number Talk sessions will focus on a particular strategy, providing opportunities to look at how we can solve problems efficiently.



What is the ultimate goal of a number talk?

At Alloway Primary, our aim is for all pupils to be assertive when talking about number. Children who can talk through the strategies they use will develop flexibility, accuracy and efficiency in their mathematical thinking.



Why number talks?

Encouraging pupils to share their thinking not only develops a confident individual, it opens a door of opportunity to see things differently and in a way that better suits the needs of individual learners. Sharing different strategies also encourages problem solving; a skill required in many areas of life.

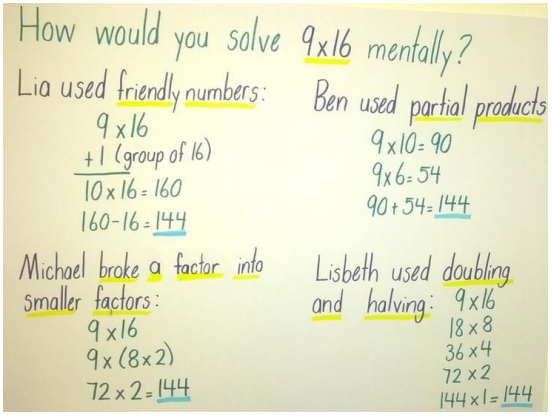
How can I support my child with Number Talks?

You can support your child by exploring the strategies they are using in class. The strategies used are attached on the following pages of this handbook. Please note, that multiplication and division strategies are not formally taught until P5. Until then we focus on repeated addition and subtraction as well as times table facts. However, some children may discover strategies before this, a fundamentally important aspect of Number Talks.

We are currently adding video clips of each strategy to our web-page. Please check here for further guidance.

What if my child doesn't like a particular strategy?

The whole point of Number Talks is to encourage pupils to explore strategies that work for them. They will be taught to expect that not all strategies work for them. As long as they can tackle any given problem using a chosen strategy that works for them, they will continue to build number sense.

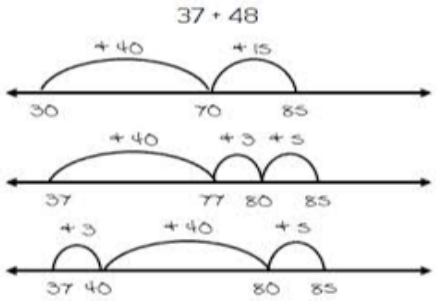


Strategies to Support Mental Calculations Involving the Four Operations

Addition

Adding Up in Chunks/ Counting On

37 + 48



Reordering

25 + 26 + 75

100 + 26 = 126

Place Value - Partitioning

116 + 127

100 + 100= 200

10 + 20 = 30

6 + 7 = 13

200+30+13=243

Making Tens/Bridging Through 10

49 + 38

1 7

50 + 37= 87

Compensation

67 + 28

+2

67 + 30 = 97

97-2 = 95

Doubles/Near Doubles

16 + 17

16 1

16 + 16= 32

32 + 1 = 33

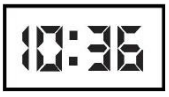
Friendly Numbers

28+47

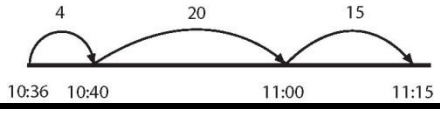
+2 -2

30 + 45= 75

Bridging Through 60



How many minutes is it to the next hour?



Subtraction

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Removal or Counting Back

123 - 69

123 - (20+40+3+6)

123 – 20 = 103

103 – 40 = 63

63 – 3 = 60

60 – 6 = 54

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Reordering

25 - 6 - 5

20 - 6 = 14

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Place Value - Partitioning

367 - 154

367 – 100 = 267

267 - 50 = 217

217 - 4 = 213

367 – 100 – 50 – 4 = 213

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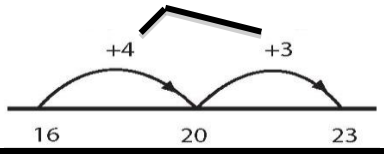
Adding Up/Bridging Through 10

23 - 16

16 + 4 = 20

20 + 3 = 23

7



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Place Value

399 - 254

(300+90+9) – (200+50+9)

300 – 200 = 100

90 – 50 = 40

9 – 4 = 5

100 + 40 + 5 = 145

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Place Value (with negative numbers)

324 - 247

(300+20+4) – (200+40+7)

300 – 200 = 100

20 – 40 = -20

4 - 7 = -3

100 - 20 - 3 = 77

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Adjusting for Easier Numbers

123-59

+1

123 – 60 = 63

63 + 1 = 64

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Keep a Constant Difference

151–98

(151 + 2) – (98+2)

153 – 100 = 53

151 – 98 = 53

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Multiplication

Friendly Numbers

9 × 15

10 × 15 = 150

150 – 15 = 135

Don't forget to 'undo' your change!

Repeated Addition

4 × 25

25 + 25 + 25 + 25

50 + 50

100

Partial Products

6 × 125

6 × (100 + 20 + 5)

(6×100) + (6×20) + (6×5)

600 + 120 + 30 = 750

Doubling and Halving

24 × 8

x2 ÷2

48 × 4

x2 ÷2

96 × 2

x2 ÷2

192

Breaking Factors into Smaller Factors

12 × 25

2 × 6

2 × 25 = 50

50 × 6 = 300

Grid Method

35×7

×	30	5
7	210	35

210 + 35 = 245

Division

Repeated Subtraction

24 ÷ 6

24 – 6 – 6 – 6 – 6

1x 2x 3x 4x

We are able to subtract 4 lots of 6 therefore:

24 ÷ 6 = 4

Proportional Reasoning

Making each number either side of the division sign in the problem smaller by dividing it by the same number.

384 ÷ 16

= (384 ÷ 2) ÷ (16 ÷ 2)

= (192÷2) ÷ (8 ÷ 2)

= (96 ÷2) ÷ (4 ÷ 2)

= 48 ÷ 2 = 24

Partial Quotients

420 ÷ 3

3 | 420

?

(300 ÷ 3) + (120 ÷ 3)

3 | 300 | 120

100 + 40 = 140

Multiplying Up

72 ÷ 8

Think: How many times does 8 need to be multiplied to reach the target number?

8 × 5 = 40

8 × 4 = 32

40 + 32 = 72

(5 + 4 = 9)

72 ÷ 8 = 9