



# Deepdale Community Primary School

(KIRF's)

## Key Instant Recall Facts

As a school, we recognise the importance of fluency and mental skills in mathematics and this new approach will support children at Deepdale Community Primary School in becoming more secure in their recall of the key facts for their year group, enabling them to approach more complex maths with confidence and flexibility.

### What are KIRFs and why are they important?

KIRFs are the 'Key Instant Recall Facts' that children need to secure during their primary years. They include facts such as number bonds and times tables. They are particularly useful when calculating, adding, subtracting, multiplying and dividing but also underpin many other areas of mathematics.

For example, in order to find equivalent fractions in Year 6, children need to be able to rapidly recall their knowledge of common multiples (numbers in particular times tables). When children have quick access to a bank of facts, which incur little cost to working memory, they have more capacity to think about more complex problems that draw on these facts.

We have noticed that without regular rehearsal, these facts are forgotten so it is essential they are practised regularly and embedded in children's long-term memory so they can be recalled quickly and accurately.

## **What can you do at home?**

We strongly encourage you to engage with your children in the learning of their KIRFs and find fun and practical ways to do this. There are many online tools that you can use such as Times Table Rockstars for Years 2-6, Numbots for Reception, Year 1 and 2, Daily ten and Hit the button which can both be found through these web links.

<https://www.topmarks.co.uk/maths-games/daily10>

<https://www.topmarks.co.uk/maths-games/hit-the-button>

<https://mathsframe.co.uk/en/resources/resource/504/Super-Maths-Bowling-Multiplication>

## **How often should my child practise?**

Children should undertake these regularly as part of weekly homework. You might find that your child may need to work on some of the KIRFs from the previous year as they may not be secure in those yet.

We know that, by internalising these key facts which have been carefully structured to build upon each other term by term, year by year, children will leave Deepdale Community Primary School with a much stronger foundation of mathematical understanding to build upon.

**By the end of the year, children should know the following facts. The aim is for them to recall these facts instantly.**

Skills	Examples
<b>Reception/EYFS Number Facts</b>	
Recall number bonds and related subtraction facts for all numbers to 5.	Such as: $2 + 3 = \underline{\quad}$ $1 + \underline{\quad} = 5$ $5 = \underline{\quad} + 3$ $5 - 3 = \underline{\quad}$ $5 - \underline{\quad} = 4$
Subitise numbers up to 5	See 'different' pictorial representations of numbers and say the number without counting
<b>Year 1 Number Facts</b>	
Recall number bonds and related subtraction facts for all numbers to 10.	Such as: $6 + 4 = \underline{\quad}$ $2 + \underline{\quad} = 10$ $10 = \underline{\quad} + 5$ $10 - 3 = \underline{\quad}$ $10 - \underline{\quad} = 1$ $7 = 10 - \underline{\quad}$ $3 + 4 = \underline{\quad}$ $5 + \underline{\quad} = 7$ $7 = \underline{\quad} + 6$ $7 - 2 = \underline{\quad}$ $7 - \underline{\quad} = 3$
Recall doubles of all numbers to 10 and corresponding halves.	Such as: $3 + 3 = \underline{\quad}$ double 6 is $\underline{\quad}$ half of 14 is $\underline{\quad}$ halve 8 double $\underline{\quad}$ is 10
<b>Year 2 Number Facts</b>	
Recall number bonds and related subtraction facts for all numbers to 20	Such as: $16 + 4 = \underline{\quad}$ $2 + \underline{\quad} = 20$ $20 = \underline{\quad} + 5$ $20 - 13 = \underline{\quad}$ $20 - \underline{\quad} = 1$ $6 = 20 - \underline{\quad}$ $3 + 14 = \underline{\quad}$ $5 + \underline{\quad} = 14$ $14 = \underline{\quad} + 6$ $14 - 2 = \underline{\quad}$ $14 - \underline{\quad} = 3$ $5 = 14 - \underline{\quad}$
Recall and use number bonds to 5 totalling 60 (to support time).	Such as: $40 + 20 = \underline{\quad}$ $25 + \underline{\quad} = 60$ $60 = \underline{\quad} + 15$ $60 - 10 = \underline{\quad}$ $60 - \underline{\quad} = 30$ $35 = 60 - \underline{\quad}$
Recall and use multiplication and division facts for 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	Such as: $6 \times 2 = \underline{\quad}$ $2 \times \underline{\quad} = 16$ $\underline{\quad} \times 5 = 15$ $\underline{\quad} = 5 \times 7$ $110 \div 10 = \underline{\quad}$ $\underline{\quad} = 80 \div 10$ Which of these numbers are odd? 32, 44, 18, 40, 55, 23, 100

### Year 3 Number Facts

<b>Recall addition and subtraction facts for 100 (multiples of 5 and 10).</b>	Such as: $100 - 30 = \underline{\quad}$ $20 + \underline{\quad} = 100$ $100 = \underline{\quad} + 5$ $100 - 45 = \underline{\quad}$ $100 - \underline{\quad} = 15$ $65 = 100 - \underline{\quad}$
<b>Recall and use multiplication division facts for the 3, 4 and 8 multiplication tables.</b>	Such as: $6 \times 3 = \underline{\quad}$ $2 \times 4 = \underline{\quad}$ $4 \times 8 = \underline{\quad}$ $20 = 4 \times \underline{\quad}$ $21 = 3 \times \underline{\quad}$ $32 = \underline{\quad} \times 8$ $\underline{\quad} \times 4 = 28$ $30 \div 3 = \underline{\quad}$ $24 \div 4 = \underline{\quad}$ $72 \div 8 = \underline{\quad}$ $3 = 36 \div \underline{\quad}$ $\underline{\quad} = 32 \div 4$ $\underline{\quad} = 48 \div 6$

### Year 4 Number Facts

<b>Recall and use addition and subtraction facts for 100</b>	Such as: $100 - 33 = \underline{\quad}$ $24 + \underline{\quad} = 100$ $100 = \underline{\quad} + 71$ $100 - 49 = \underline{\quad}$ $100 - \underline{\quad} = 19$ $68 = 100 - \underline{\quad}$
<b>Recall and use addition and subtraction facts for multiples of 100 totalling 1000</b>	Such as: $1000 - 400 = \underline{\quad}$ $200 + \underline{\quad} = 1000$ $1000 = \underline{\quad} + 100$ $300 = 1000 - \underline{\quad}$
<b>Recall multiplication and division facts for multiplication tables up to 12 x 12</b>	Such as: $7 \times 6 = \underline{\quad}$ $48 = 12 \times \underline{\quad}$ $3 \times \underline{\quad} = 27$ $\underline{\quad} \times \underline{\quad} = 35$ $45 \div 9 = \underline{\quad}$ $\underline{\quad} \div 8 = 11$ $12 = 108 \div \underline{\quad}$

### Year 5 Number Facts

<b>Recall addition and subtraction facts for 1 and 10 (with numbers to one decimal place).</b>	Such as: $0.6 + 0.4 = \underline{\quad}$ $0.2 + \underline{\quad} = 1$ $1 = \underline{\quad} + 0.5$ $1 - 0.3 = \underline{\quad}$ $1 - \underline{\quad} = 0.1$ $1.3 + 8.7 = \underline{\quad}$ $2.5 + \underline{\quad} = 10$ $10 = \underline{\quad} + 4.6$ $10 - 5.2 = \underline{\quad}$ $10 - \underline{\quad} = 6.3$
<b>Recall related tables facts for multiples of 10</b>	Such as: $70 \times 6$ $8 \times 40$ $90 \times 6$
<b>Recall prime numbers up to 19</b>	Instantly know the prime numbers 2, 3, 5, 7, 11, 13, 17 and 19
<b>Recall square (²) numbers up to 12 x 12</b>	Instantly know the square of all numbers to 12: $1^2 = 1$ , $2^2 = 4$ , $3^2 = 9$ , $4^2 = 16$ , $5^2 = 25$ , $6^2 = 36$ , $7^2 = 49$ , $8^2 = 64$ , $9^2 = 81$ , $10^2 = 100$ , $11^2 = 121$ and $12^2 = 144$

### Year 6 Number Facts

<b>Recall and use addition and subtraction facts for 1 (with decimals to two decimal places)</b>	Such as: $1 = 0.05 + \underline{\quad}$ $0.95 + \underline{\quad} = 1$ $\underline{\quad} + 0.8 = 1$ $0.09 + \underline{\quad} = 1$ $0.23 + \underline{\quad} = 1$ $\underline{\quad} + 0.4 = 1$
<b>Multiply and divide numbers by 10, 100, 1000 giving answers up to three decimal places</b>	Such as: $345 \times 10 =$ $4598 \div 10 =$ $452 \div \underline{\quad} = 4.52$ $894 \times 100 =$ $2098 \div 100 =$ $109 \times \underline{\quad} = 10900$
<b>Recall and use equivalences between simple fractions, decimals and percentages</b>	Such as: $\frac{1}{2} = 0.5 = 50\%$ ; $\frac{1}{4} = 0.25 = 25\%$ ; $\frac{1}{5} = 0.2 = 20\%$ ; $\frac{3}{10} = 0.3 = 30\%$ ; $\frac{3}{5} = 0.6 = 60\%$

We hope that you enjoy working alongside your children with this mathematics work. Should you have any questions about the KIRFs programme, please do not hesitate to contact the school.