Mathematics @ Dinnington

KIRFs

Key Instant Recall Facts

To help develop children's fluency in Mathematics, we have identified some Key Instant Recall Facts that should be learnt off by heart each half term.

Children will practice these facts in class, but would benefit from regular practice at home 3 time a week as well. At the end of each half term they will be assessed on how well they achieve each fact.

Please see attached lists of KIRFs which are aligned to the Maths curriculum we deliver.

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day. If you would like more ideas, please speak to your child's teacher.

Year 4 Block 1 KIRFs

By the end of this block, children should know the following facts. The aim is for them to recall these facts instantly and accurately

Multiples of 1000 and 25

Children need to be able to know the multiples for 1000 and 25 and count in sequences involving these. e.g

1x1000= 1000
2 x1000 = 2000
3 x 1000= 3000
4 x 1000= 4000
5 x 1000= 5000
6 x 1000= 6000
7 x 1000=7000
8 x 1000= 8000
9 x 1000= 9000
10 x 1000= 10,000

They should be able to count in 1000s in sequences e.g
1000, ____, 3000, ____, 5000, ____, 7000

1x25= 25
2 x25 =50
3 x 25= 75
4 x 25= 100
5 x 25= 125
6 x 25= 150
7 x 25=175
8 x 25= 200
9 x 25= 225
10 x 25= 250

They should be able to count in 25s in sequences e.g
25, ____, , 75____, 125, ____, 175

Possible Learning Activities

- Say the next 3 numbers – children continue a sequence started by an adult
- Odd one out / spot the mistake – children identify the error or odd one out as an adult counts
- Sequencing – print off the numbers can pupils put them in the correct order

Year 4 Block 2 KIRFs

By the end of this block, children should know the following facts. The aim is for them to recall these facts instantly and accurately

Multiplication and division facts for the 6 times table

6 × 1 = 6	1 × 6 = 6	6 ÷ 6 = 1	6 ÷ 1 = 6
6 × 2 = 12	2 × 6 = 12	12 ÷ 6 = 2	12 ÷ 2 = 6
6 × 3 = 18	3 × 6 = 18	18 ÷ 6 = 3	18 ÷ 3 = 6
6 × 4 = 24	4 × 6 = 24	24 ÷ 6 = 4	24 ÷ 4 = 6
6 × 5 = 30	5 × 6 = 30	30 ÷ 6 = 5	30 ÷ 5 = 6
6 × 6 = 36	6 × 6 = 36	36 ÷ 6 = 6	36 ÷ 6 = 6
6 × 7 = 42	7 × 6 = 42	42 ÷ 6 = 7	42 ÷ 7 = 6
6 × 8 = 48	8 × 6 = 48	48 ÷ 6 = 8	48 ÷ 8 = 6
6 × 9 = 54	9 × 6 = 54	54 ÷ 6 = 9	54 ÷ 9 = 6
6 × 10 = 60	10 × 6 = 60	60 ÷ 6 = 10	60 ÷ 10 = 6
6 × 11 = 66	11 × 6 = 66	66 ÷ 6 = 11	66 ÷ 11 = 6
6 × 12 = 72	12 × 6 = 72	72 ÷ 6 = 12	72 ÷ 12 = 6

Key Vocabulary

What is 8 **multiplied by** 6?

What is 6 **times** 8?

What is 24 **divided by** 6?

They should be able to answer these questions in any order, including missing number questions e.g. 6 × ◯ = 72 or ◯ ÷ 6 = 7.

Possible Learning Activities

Play TTRS

Songs and Chants – You can buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

Double your threes – Multiplying a number by 6 is the same as multiplying by 3 and then doubling the answer. 7 × 3 = 21 and double 21 is 42, so 7 × 6 = 42.

Buy one get three free – If your child knows one fact (e.g. 3 × 6 = 18), can they tell you the other three facts in the same fact family? Warning! – When creating fact families, children sometimes get confused by the order of the numbers in the division number sentence. It is tempting to say that the biggest number goes first, but it is more helpful to say that the answer to the multiplication goes first, as this will help your child more in later years when they study fractions, decimals and algebra. E.g. 6 × 12 = 72. The answer to the multiplication is 72, so 72 ÷ 6 = 12 and 72 ÷ 12 = 6

Games Use sumdog tables practise at www.sumdog.com

Year 4 Block 3 KIRFs

By the end of this block, children should know the following facts. The aim is for them to recall these facts instantly and accurately

Multiplication and division facts for the 9 and 11 times table

9 × 1 = 9	9 ÷ 9 = 1	11 × 1 = 11	11 ÷ 11 = 1
9 × 2 = 18	18 ÷ 9 = 2	11 × 2 = 22	22 ÷ 11 = 2
9 × 3 = 27	27 ÷ 9 = 3	11 × 3 = 33	33 ÷ 11 = 3
9 × 4 = 36	36 ÷ 9 = 4	11 × 4 = 44	44 ÷ 11 = 4
9 × 5 = 45	45 ÷ 9 = 5	11 × 5 = 55	55 ÷ 11 = 5
9 × 6 = 54	54 ÷ 9 = 6	11 × 6 = 66	66 ÷ 11 = 6
9 × 7 = 63	63 ÷ 9 = 7	11 × 7 = 77	77 ÷ 11 = 7
9 × 8 = 72	72 ÷ 9 = 8	11 × 8 = 88	88 ÷ 11 = 8
9 × 9 = 81	81 ÷ 9 = 9	11 × 9 = 99	99 ÷ 11 = 9
9 × 10 = 90	90 ÷ 9 = 10	11 × 10 = 110	110 ÷ 11 = 10
9 × 11 = 99	99 ÷ 9 = 11	11 × 11 = 121	121 ÷ 11 = 11
9 × 12 = 108	108 ÷ 9 = 12	11 × 12 = 132	132 ÷ 11 = 12

Key Vocabulary

What is 8 **multiplied by** 6?

What is 6 **times** 8?

What is 24 **divided by** 6?

They should be able to answer these questions in any order, including missing number questions e.g. 9 × ◯ = 54 or ◯ ÷ 9 = 11.

Possible Learning Activities

Play TTRS

Look for patterns – These times tables are full of patterns for your child to find. How many can they spot? Use your ten times table – Multiply a number by 10 and subtract the original number (e.g. 7 × 10 – 7 = 70 – 7 = 63). What do you notice? What happens if you add your original number instead? (e.g. 7 × 10 + 7 = 70 + 7 = 77)

What do you already know? – Your child will already know many of these facts from the 2, 3, 4, 5, 6, 8 and 10 times tables. It might be worth practising these again!

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Year 4 Block 4 KIRFs

By the end of this block, children should know the following facts. The aim is to recall these facts instantly and accurately

Decimal equivalents to fractions

$\frac{1}{2} = 0.5$

$\frac{1}{4} = 0.25$

$\frac{3}{4} = 0.75$

$\frac{1}{10} = 0.1$

$\frac{2}{10} = 0.2$

$\frac{5}{10} = 0.5$

$\frac{6}{10} = 0.6$

$\frac{9}{10} = 0.9$

$\frac{1}{100} = 0.01$

$\frac{7}{100} = 0.07$

$\frac{21}{100} = 0.21$

$\frac{75}{100} = 0.75$

$\frac{99}{100} = 0.99$

Key Vocabulary

How many **tenths** is 0.8?

How many **hundredths** is 0.12?

Write 0.75 as a **fraction**?

Write ¼ as a **decimal**?

Children should be able to convert between decimals and fractions for ½, ¼, ¾ and any number of tenths and hundredths.

Possible Learning Activities

Play games - Make some cards with pairs of equivalent fractions and decimals. Use these to play the memory game or snap. Or make your own dominoes with fractions on one side and decimals on the other.

Year 4 Block 5 KIRFs

By the end of this block, children should know the following facts. The aim is for them to recall these facts instantly and accurately

Multiplication facts for the 7 and 12 x tables

9 × 1 = 9	9 ÷ 9 = 1	11 × 1 = 11	11 ÷ 11 = 1
9 × 2 = 18	18 ÷ 9 = 2	11 × 2 = 22	22 ÷ 11 = 2
9 × 3 = 27	27 ÷ 9 = 3	11 × 3 = 33	33 ÷ 11 = 3
9 × 4 = 36	36 ÷ 9 = 4	11 × 4 = 44	44 ÷ 11 = 4
9 × 5 = 45	45 ÷ 9 = 5	11 × 5 = 55	55 ÷ 11 = 5
9 × 6 = 54	54 ÷ 9 = 6	11 × 6 = 66	66 ÷ 11 = 6
9 × 7 = 63	63 ÷ 9 = 7	11 × 7 = 77	77 ÷ 11 = 7
9 × 8 = 72	72 ÷ 9 = 8	11 × 8 = 88	88 ÷ 11 = 8
9 × 9 = 81	81 ÷ 9 = 9	11 × 9 = 99	99 ÷ 11 = 9
9 × 10 = 90	90 ÷ 9 = 10	11 × 10 = 110	110 ÷ 11 = 10
9 × 11 = 99	99 ÷ 9 = 11	11 × 11 = 121	121 ÷ 11 = 11
9 × 12 = 108	108 ÷ 9 = 12	11 × 12 = 132	132 ÷ 11 = 12

Key Vocabulary

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What is 24 **divided by** 6?

They should be able to answer these questions in any order, including missing number questions e.g. 9 × ◯ = 54 or ◯ ÷ 9 = 11.

Possible Learning Activities

Play TTRS

Look for patterns – These times tables are full of patterns for your child to find. How many can they spot?

Use your ten times table – Multiply a number by 10 and subtract the original number (e.g. 7 × 10 – 7 = 70 – 7 = 63). What do you notice? What happens if you add your original number instead? (e.g. 7 × 10 + 7 = 70 + 7 = 77)

What do you already know? – Your child will already know many of these facts from the 2, 3, 4, 5, 6, 8 and 10 times tables. It might be worth practising these again!

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Year 4 Block 6 KIRFs

By the end of this block, children should know the following facts. The aim is for them to recall these facts instantly and accurately

I can scale number facts by 10 to solve problems mentally

Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10), for example:

8 + 6 = 14 and 14- 6= 8 so 80 + 60 = 140 and 140- 60=80
3 x 4 =12 and 12÷ 4 = 3 so 30 x 4 =120 and 120÷ 40 = 3

Children need to apply this knowledge to number facts within 20 and multiplication facts up to 12 x 12. Look at previous fact sheets for facts within 20 and multiplication facts for 12 x 12.

Possible Learning Activities

Games: Play fact tennis. For example, I say 7 + 5 = 12 and the partner then says the fact scaled by 10 so 70 + 50 = 120 and repeat with different facts