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 2 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

Number bonds for each number to 20

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

They should be able to answer these questions in any order, including missing number questions e.g. $19 + \bigcirc = 20$ or $20 - \bigcirc = 8$.

$0 + 20 = 20$	$20 + 0 = 20$	$20 - 0 = 20$	$20 - 20 = 0$
$1 + 19 = 20$	$19 + 1 = 20$	$20 - 1 = 19$	$20 - 19 = 1$
$2 + 18 = 20$	$18 + 2 = 20$	$20 - 2 = 18$	$20 - 18 = 2$
$3 + 17 = 20$	$17 + 3 = 20$	$20 - 3 = 17$	$20 - 17 = 3$
$4 + 16 = 20$	$16 + 4 = 20$	$20 - 4 = 16$	$20 - 16 = 4$
$5 + 15 = 20$	$15 + 5 = 20$	$20 - 5 = 15$	$20 - 15 = 5$
$6 + 14 = 20$	$14 + 6 = 20$	$20 - 6 = 14$	$20 - 14 = 6$
$7 + 13 = 20$	$13 + 7 = 20$	$20 - 7 = 13$	$20 - 13 = 7$
$8 + 12 = 20$	$12 + 8 = 20$	$20 - 8 = 12$	$20 - 12 = 8$
$9 + 11 = 20$	$11 + 9 = 20$	$20 - 9 = 11$	$20 - 11 = 9$
$10 + 10 = 20$		$20 - 10 = 10$	

Key Vocabulary

What do I **add** to 5 to make 20?

What is 20 **take away** 6?

What is 3 **less than** 20?

How many more than 16 is 20?

Possible learning activities

<u>Use what you already know</u> – Use number bonds to 10 (e.g. 7 + 3 = 10) to work out related number bonds to 20 (e.g. 17 + 3 = 20).
<u>Use practical resources</u> – Make collections of 20 objects. Ask questions such as, "How many more conkers would I need to make 20?"
 <u>Play games</u> – You can play number bond pairs online at www.conkermaths.com and then see how many questions you can answer in just one minute. You can also use Numbots to work on number facts within 20.

Year 2 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 2 times table

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

$2 \times 1 = 2$	$2 \div 2 = 1$
$2 \times 2 = 4$	$4 \div 2 = 2$
$2 \times 3 = 6$	$6 \div 2 = 3$
$2 \times 4 = 8$	$8 \div 2 = 4$
$2 \times 5 = 10$	$10 \div 2 = 5$
$2 \times 6 = 12$	$12 \div 2 = 6$
$2 \times 7 = 14$	$14 \div 2 = 7$
$2 \times 8 = 16$	$16 \div 2 = 8$
$2 \times 9 = 18$	$18 \div 2 = 9$
$2 \times 10 = 20$	$20 \div 2 = 10$
$2 \times 11 = 22$	$22 \div 2 = 11$
$2 \times 12 = 24$	$24 \div 2 = 12$

Key Vocabulary

What is 2 **multiplied by** 7?

What is 2 **times** 9?

What is 12 **divided by** 2?

They should be able to answer these questions in any order, including missing number questions e.g. $2 \times \bigcirc = 8$ or $\bigcirc \div 2 = 6$.

Possible learning activities

- 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.
- Use what you already know – If your child knows that $2 \times 5 = 10$, they can use this fact to work out that $2 \times 6 = 12$ and $6 \times 2 = 12$ (commutative law).
- Test the Parent – Your child can make up their own tricky division questions for you e.g. What is 18 divided by 2? They need to be able to multiply to create these questions.
- Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some strange picture stories to help children remember.
- Games- X Table Rock Stars

Year 2 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

Doubles and halves of numbers to 20

0 + 0 = 0	½ of 0 = 0	
1 + 1 = 1	½ of 2 = 1	11 + 11 = 22
2 + 2 = 4	½ of 4 = 2	12 + 12 = 24
3 + 3 = 6	½ of 6 = 3	13 + 13 = 26
4 + 4 = 8	½ of 8 = 4	14 + 14 = 28
5 + 5 = 10	½ of 10 = 5	15 + 15 = 30
6 + 6 = 12	½ of 12 = 6	16 + 16 = 32
7 + 7 = 14	½ of 14 = 7	17 + 17 = 34
8 + 8 = 16	½ of 16 = 8	18 + 18 = 36
9 + 9 = 18	½ of 18 = 9	19 + 19 = 38
10 + 10 = 20	½ of 20 = 10	20 + 20 = 40

Key Vocabulary

What is **double** 9?

What is **half** of 14?

Possible learning activities

Use what you already know – Encourage your child to find the connection between the 2 times table and double facts. Ping Pong – In this game, the parent says, "Ping," and the child replies, "Pong." Then the parent says a number and the child doubles it. For a harder version, the adult can say, "Pong." The child replies, "Ping," and then halves the next number given.

Practise online – Go to www.conkermaths.com and see how many questions you can answer in just 90 seconds.

Year 2 Block 4 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 10 times table

$10 \times 1 = 10$	$10 \div 10 = 1$
$10 \times 2 = 20$	$20 \div 10 = 2$
$10 \times 3 = 30$	$30 \div 10 = 3$
$10 \times 4 = 40$	$40 \div 10 = 4$
$10 \times 5 = 50$	$50 \div 10 = 5$
$10 \times 6 = 60$	$60 \div 10 = 6$
$10 \times 7 = 70$	$70 \div 10 = 7$
$10 \times 8 = 80$	$80 \div 10 = 8$
$10 \times 9 = 90$	$90 \div 10 = 9$
$10 \times 10 = 100$	$100 \div 10 = 10$
$10 \times 11 = 110$	$110 \div 10 = 11$
$10 \times 12 = 120$	$120 \div 10 = 12$

Key Vocabulary

What is 10 **multiplied by** 3?

What is 10 **times** 9?

What is 70 **divided by** 10?

They should be able to answer these questions in any order, including missing number questions e.g. $10 \times \bigcirc = 80$ or $\bigcirc \div 10 = 6$.

Possible learning activities

Pronunciation – Make sure that your child is pronouncing the numbers correctly and not getting confused between thirteen and thirty.

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.

Test the Parent – Your child can make up their own tricky division questions for you e.g. What is 70 divided by 7? They need to be able to multiply to create these questions.

Apply these facts to real life situations – How many toes are in your house? What other multiplication and division questions can your child make up?

Games- Use X Table Rockstars to practise recall.

Year 2 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

Count, read and write numbers to 100 in numerals

Children need to be able to count, read and write all the numbers from 1-100

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

Possible Learning Activities

Games- Play a game of snakes and ladders. Cover up numbers on the 100 square and ask them to work out what number it is. Talk to them about what number is before and next. If I jump on 4 what number will I be on? If I jump back 6 what number will I be on? Use number splat online- shout numbers out for children to splat

Year 2 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

Multiplication and division facts for the 5 times table

5 × 1 = 5	5 ÷ 5 = 1
5 × 2 = 10	10 ÷ 5 = 2
5 × 3 = 15	15 ÷ 5 = 3
5 × 4 = 20	20 ÷ 5 = 4
5 × 5 = 25	25 ÷ 5 = 5
5 × 6 = 30	30 ÷ 5 = 6
5 × 7 = 35	35 ÷ 5 = 7
5 × 8 = 40	40 ÷ 5 = 8
5 × 9 = 45	45 ÷ 5 = 9
5 × 10 = 50	50 ÷ 5 = 10
5 × 11 = 55	55 ÷ 5 = 11
5 × 12 = 60	60 ÷ 5 = 12

Key Vocabulary

What is 5 **multiplied by** 7?

What is 5 **times** 9?

What is 60 **divided by** 5?

They should be able to answer these questions in any order, including missing number questions e.g. 5 × ○ = 40 or ○ ÷ 5 = 9.

Possible Learning Activities

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?

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. Spot patterns – What patterns can your child spot in the 5 times table? Are there any similarities with the 10 times table?
Test the Parent – Your child can make up their own tricky division questions for you e.g. What is 45 divided by 5? They need to be able to multiply to create these questions.
Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some strange picture stories to help children remember.
Games- Use sumdog tables practise at www.sumdog.com