Oaklands Infant School
Key Instant Recall Facts

Fluency in number is key to accessing all areas of Mathematics confidently and securely. We have devised a 'Progression in Key Facts' scheme that children will systematically work through to ensure they are fluent and confident in their basic skills.

Why are they important?

Research shows that:

- *Learning key facts 'by heart' enables children to concentrate on the calculation, which helps them to develop better calculation strategies.*
- *Using and applying strategies to work out answers helps children to acquire and so remember more facts.*
- *Many children who are not able to recall key facts often treat each calculation as a new one and have to return to first principles to work out the answer again.*
- *Once they have a secure knowledge of some key facts, children can learn to appreciate that from the answer to one problem, other answers can be generated.*

Knowing number facts 'off by heart' frees up space in a child's working memory when they complete more complex calculations and allows children to reason and problem solve with greater depth.

The bullet points below set out how the scheme works, however if you have any queries please contact your child's class teacher.

- *Children will be given a set of number facts to learn over the course of approximately six weeks. These facts will link to a calculation strategy.*
- *They should practise these at home wherever possible and the facts will also be practised in class.*
- *They are not designed to be a time-consuming task and can be practised anywhere – in the car, walking to school, etc.*
- *Regular practice - little and often – helps children to retain these facts and keep their skills sharp.*
- *The aim is to be able to recall each fact in the set* ***within 3 seconds.***

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- *It is important for children to look at the facts in order to learn the pattern and make connections but they should also be able to know them out of sequence and they will be tested on them in a random order.*
- *There will be an assessment at the end of the six weeks to check if the facts have been retained.*

Key Facts Needed in KS1

+	0	1	2	3	4	5	6	7	8	9	10
0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10
1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	1+10
2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+9	2+10
3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7	3+8	3+9	3+10
4	4+0	4+1	4+2	4+3	4+4	4+5	4+6	4+7	4+8	4+9	4+10
5	5+0	5+1	5+2	5+3	5+4	5+5	5+6	5+7	5+8	5+9	5+10
6	6+0	6+1	6+2	6+3	6+4	6+5	6+6	6+7	6+8	6+9	6+10
7	7+0	7+1	7+2	7+3	7+4	7+5	7+6	7+7	7+8	7+9	7+10
8	8+0	8+1	8+2	8+3	8+4	8+5	8+6	8+7	8+8	8+9	8+10
9	9+0	9+1	9+2	9+3	9+4	9+5	9+6	9+7	9+8	9+9	9+10
10	10+0	10+1	10+2	10+3	10+4	10+5	10+6	10+7	10+8	10+9	10+10

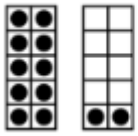
-	0	1	2	3	4	5	6	7	8	9	10
0	0-0										
1	1-0	1-1									
2	2-0	2-1	2-2								
3	3-0	3-1	3-2	3-3							
4	4-0	4-1	4-2	4-3	4-4						
5	5-0	5-1	5-2	5-3	5-4	5-5					
6	6-0	6-1	6-2	6-3	6-4	6-5	6-6				
7	7-0	7-1	7-2	7-3	7-4	7-5	7-6	7-7			
8	8-0	8-1	8-2	8-3	8-4	8-5	8-6	8-7	8-8		
9	9-0	9-1	9-2	9-3	9-4	9-5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

Oaklands Infant School
Key Instant Recall Facts

Year 2
Autumn 1

Strategy
Ten and a Bit

Ten and A Bit



The numbers 11 – 20 are made up of 'Ten and a Bit'. Recognising and understanding the 'Ten and a Bit' structure of these numbers enables addition and subtraction facts involving their constituent parts (e.g. 3 + 10 = 13, 17 – 7 = 10, 12 – 10 = 2).

Facts to learn:

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

Facts to learn:

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

It is important for children to look at these in order to learn the pattern and make connections. They should also be able to know them out of sequence and they will be tested on them in a random order.

Note – variation

17 = 10 +7

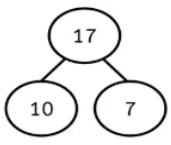
17 = ☐ + 7

Key Vocabulary

part whole partition

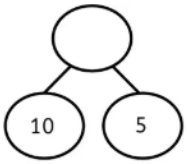
add plus total of altogether subtract less than minus

Q4. Look at the image. Which addition does it represent?



✓ 17 = 10 + 7
✓ 7 + 10 = 17
17 + 10 = 7

Q5. What is the missing whole in this image?



✓ 15

Q1. How many pencils are shown here?

✓ 14, fourteen

Oaklands Infant School
Key Instant Recall Facts

Year 2
Autumn 2

Strategy

Number Neighbours – Spot the Difference

Adjacent numbers have a difference of 1. Adjacent odds and evens have a difference of 2.

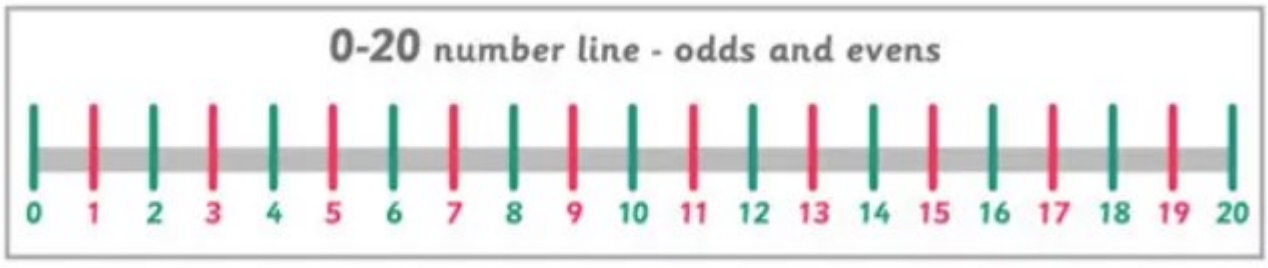
Spot number neighbours (adjacent, odds or evens) to solve subtractions of adjacent numbers (e.g. 5 – 4 = 1), of adjacent odds (e.g. 9 – 7 = 2) or adjacent evens (e.g. 6 – 4 = 2)

Facts to Learn	Facts to Learn
2 – 1 = 1	2 – 0 = 2
3 – 2 = 1	3 – 1 = 2
4 – 3 = 1	4 – 2 = 2
5 – 4 = 1	5 – 3 = 2
6 – 5 = 1	6 – 4 = 2
7 – 6 = 1	7 – 5 = 2
8 – 7 = 1	8 – 6 = 2
9 – 8 = 1	9 – 7 = 2
10 – 9 = 1	10 – 8 = 2

It is important for children to look at these in order to learn the pattern and make connections. They should also be able to know them out of sequence and they will be tested on them in a random order.

Key Vocabulary

adjacent *difference* *odd* *even*



Oaklands Infant School
Key Instant Recall Facts

Year 2
Spring 1

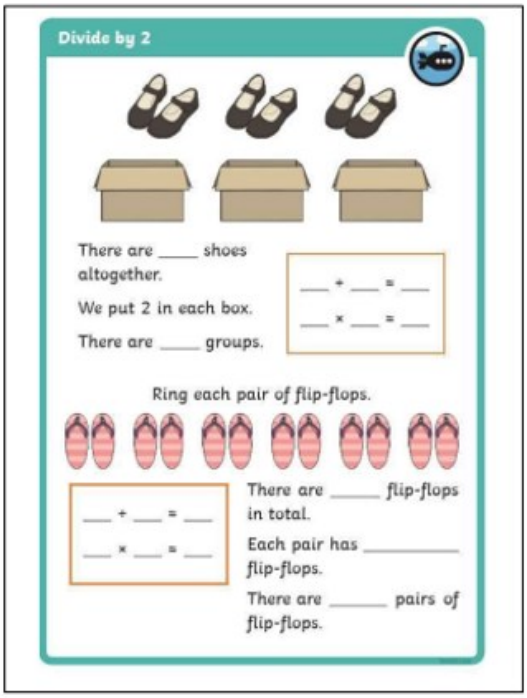
Key Facts

Two times table

Children should know both multiplication and division facts for the 2x table up to 12 x 2. They should be able to build on their knowledge of counting in twos and be able to see a pattern in the two times table.

0 x 2 = 0	0 ÷ 2 = 0	**Key vocabulary**
1 x 2 = 2	2 ÷ 2 = 1	What is 3 **times** 2?
2 x 2 = 4	4 ÷ 2 = 2	What is 2 **multiplied by** 2?
3 x 2 = 6	6 ÷ 2 = 3	What is 4 **groups of** 2?
4 x 2 = 8	8 ÷ 2 = 4	
5 x 2 = 10	10 ÷ 2 = 5	What is 18 **divided by** 2?
6 x 2 = 12	12 ÷ 2 = 6	
7 x 2 = 14	14 ÷ 2 = 7	What is 20 **shared between** 2?
8 x 2 = 16	16 ÷ 2 = 8	
9 x 2 = 18	18 ÷ 2 = 9	What is 12 **divided into groups of** 2?
10 x 2 = 20	20 ÷ 2 =10	
11 x 2 = 22	22 ÷ 2 = 11	
12 x 2 = 24	24 ÷ 2 = 12	

They should be able to answer these questions in any order, including missing number questions, e.g. 2 × ◯ = 14 or ◯ ÷ 2 = 6.



- *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 18 divided by 2? They need to be able to multiply to create these questions.*
- *Apply these facts to real life situations – How many hands are in your house? What other multiplication and division questions can your child make up?*
- *See how many questions you can answer in 90seconds. https://www.topmarks.co.uk/maths-games/daily10 and https://www.topmarks.co.uk/maths-games/hit-the-button*

Oaklands Infant School
Key Instant Recall Facts

Year 2
Spring 2

Key Facts

Ten times table

Children should know both multiplication and division facts for the 10x table up to 12 x 10. They should be able to build on their knowledge of counting in tens and be able to see a pattern in the ten times table.

Note

We don't teach – you just add a zero!

0 x 10 = 0	0 ÷ 10 = 0	**Key vocabulary**
1 x 10 = 10	10 ÷ 10 = 1	What is 3 **times** 10?
2 x 10 = 20	20 ÷ 10 = 2	
3 x 10 = 30	30 ÷ 10 = 3	What is 2 **multiplied by** 10?
4 x 10 = 40	40 ÷ 10 = 4	What is 4 **groups of** 10?
5 x 10 = 50	50 ÷ 10 = 5	
6 x 10 = 60	60 ÷ 10 = 6	
7 x 10 = 70	70 ÷ 10 = 7	What is 60 **divided by** 10?
8 x 10 = 80	80 ÷ 10 = 8	What is 40 **shared between** 10?
9 x 10 = 90	90 ÷ 10 = 9	
10 x 10 = 100	100 ÷ 10 =10	What is 70 **divided into groups of** 10?
11 x 10 = 110	110 ÷ 10 = 11	
12 x 10 = 120	120 ÷ 10 = 12	

They should be able to answer these questions in any order, including missing number questions, e.g. 10 × ◯ = 80 or ◯ ÷ 10 = 6.

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.

- Pronunciation – Make sure that your child is pronouncing the numbers correctly and not getting confused between thirteen and thirty.
- 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?
- See how many questions you can answer in 90seconds. https://www.topmarks.co.uk/maths-games/daily10 and https://www.topmarks.co.uk/maths-games/hit-the-button

Oaklands Infant School
Key Instant Recall Facts

Year 2
Summer 1

Key Facts
Five times table

Children should know both multiplication and division facts for the 5x table up to 12 x 5. They should be able to build on their knowledge of counting in fives and be able to see a pattern in the five times table.

0 x 5 = 0 1 x 5 = 5 2 x 5 = 10 3 x 5 = 15 4 x 5 = 20 5 x 5 = 25 6 x 5 = 30 7 x 5 = 35 8 x 5 = 40 9 x 5 = 45 10 x 5 = 50 11 x 5 = 55 12 x 5 = 60	5 ÷ 5 = 1 10 ÷ 5 = 2 15 ÷ 5 = 3 20 ÷ 5 = 4 25 ÷ 5 = 5 30 ÷ 5 = 6 35 ÷ 5 = 7 40 ÷ 5 = 8 45 ÷ 5 = 9 50 ÷ 5 =10 55 ÷ 5 = 11 60 ÷ 5 = 12	**Key vocabulary** What is 3 **times** 5? What is 2 **multiplied by** 5? What is 4 **groups of** 5? What is 60 **divided by** 5? What is 40 **shared between** 5? What is 70 **divided into groups of** 5?

They should be able to answer these questions in any order, using the most efficient strategy.

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.

- *Pronunciation – Make sure that your child is pronouncing the numbers correctly and not getting confused between thirteen and thirty.*
- *Spot patterns – What patterns can your child spot in the 5 times table? Are there any similarities with the 10 times table?*
- *See how many questions you can answer in 90seconds.*
  - *White Rose 1 min Maths App*
  - *https://www.topmarks.co.uk/maths-games/daily10 and https://www.topmarks.co.uk/aths-games/hit-the-button*

Oaklands Infant School
Key Instant Recall Facts

Year 2
Summer 2

Key Facts

Add and subtract multiples of 5 and 10 to 100

Facts to Learn

The children should notice patterns with adding single digit numbers when they add multiples of 10. This should be done at speed.

Use what you already know – Encourage your child to find the connection between adding single digits and then adding multiples of 10 can they spot the patterns. This is a great chance to brush up on simple addition facts and increase speed of 1 digit plus 1 digit arithmetic

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

+	10	20	30	40	50	60	70	80	90	100
10	20	30	40	50	60	70	80	90	100	110
20	30	40	50	60	70	80	90	100	110	120
30	40	50	60	70	80	90	100	110	120	130
40	50	60	70	80	90	100	110	120	130	140
50	60	70	80	90	100	110	120	130	140	150
60	70	80	90	100	110	120	130	140	150	160
70	80	90	100	110	120	130	140	150	160	170
80	90	100	110	120	130	140	150	160	170	180
90	100	110	120	130	140	150	160	170	180	190
100	110	120	130	140	150	160	170	180	190	200

Facts to Learn

15 + 85 = 100
25 + 75 = 100
35 + 65 = 100
45 + 55 = 100

Inverse

100 – 15 = 85 100 – 85 = 15

Etc.

Key Vocabulary

30 + 40 = 70
80 + 60 = 140
What is the total of 90 and 20?
What is 10 x 5 add 10 x 3?
If 4 add 3 is 6, what is 40 add 30?

1. 50 + □ = 100
2. □ + 20 = 100
3. 45 + □ = 100
4. □ + 75 = 100

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