Fluency Policy
for Nursery to Year 6

September 2020
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Revised November 2022
(updated Maths Scheme)

Fluency in the Jersey Maths Curriculum 2014

One of the three aims of the Mathematics curriculum states that pupils (of all ages, not just primary children) will: *become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.*

What is fluency?

Students exhibit computational fluency when they demonstrate flexibility in the computational methods they choose, understand and can explain these methods, and produce accurate answers efficiently.

Russell (2000) spells this out in more detail and suggests that fluency consists of three elements:

Efficiency - this implies that children do not get bogged down in too many steps or lose track of the logic of the strategy. An efficient strategy is one that the student can carry out easily, keeping track of sub-problems and making use of intermediate results to solve the problem.

Accuracy depends on several aspects of the problem-solving process, among them careful recording, knowledge of number facts and other important number relationships, and double-checking results.

Flexibility requires the knowledge of more than one approach to solving a particular kind of problem, such as two-digit multiplication. Students need to be flexible in order to choose an appropriate strategy for the numbers involved, and also be able to use one method to solve a problem and another method to check the results.

So fluency demands more of students than memorising a single procedure – they need to understand *why* they are doing what they are doing and *know when it is appropriate* to use different methods.

How can we support children in becoming fluent?

As with much of Mathematics, the key to fluency is in making connections, and making them at the right time in a child's learning.

Manipulatives
We learn by moving from the concrete to the abstract and structured apparatus such as Dienes can be helpful for learning about place value or number bonds. However, the meaning isn't in the manipulatives themselves – it has to be constructed by children over a period of time, through playing around with them and connecting them directly to mental and recorded calculation.

Talking about their work
At NRICH we often say you can't do maths unless you talk maths. But the quality of the talk is important. It is not simply children sharing how they did a particular calculation, but describing why and how it worked, and how their method is the same or different to those of others. In other words, giving children opportunities to use those higher-level skills of comparing, explaining and justifying. Russell says 'The reason that one problem can be solved in multiple ways is that mathematics does not consist of isolated rules but connected ideas. Being able to solve a problem in more than one way, therefore, reveals the ability and the predilection to make connections between and among mathematical areas and topics'.

Consolidation in meaningful contexts
By offering children practice in context we help them to make links between the types of situations that a particular strategy might suit. Russell calls this mathematical memory, which is different from just memorising. She says that important mathematical procedures cannot be "forgotten over the summer" because they are based in a web of connected ideas about fundamental mathematical relationships.

(taken from NRICH 'Developing Number Fluency – What, Why and How')

Fluency Sessions at St Lawrence School

Whilst Fluency is inevitably a part of every Maths lesson, at St Lawrence School, we also ensure that we explicitly teach the skills which enable children to become Mathematically fluent. In addition to the *White Rose* Scheme of Work which teachers follow from Reception upwards, Fluency session take place 15 minutes daily, or three 25-minute sessions per week, dependent on the needs of the class and the class timetable.

Times Tables must be taught explicitly in Key Stage 2 at least once a week and resources are given at the end of this document to enable teachers to deliver engaging, interactive Fluency sessions.

Children work towards their 'Number Bonds' achievement certificates where they are assessed by the Maths Coordinator and are then awarded the appropriate certificate.

Children work towards their 'Times Tables' Medal which involves them consistently, **<u>over at least half a term</u>**, getting 100% on all times tables in under five minutes.

If we want children to have the fluency to apply learning in a range of contexts, we need to expose the underlying concepts. Concepts need to be explored through a range of representations and strategies. We need to teach children to pull numbers apart, manipulate them, and examine and investigate patterns.

Every half-term, children are encouraged to practise a specific area relating to Fluency at home (see details at the end of this policy).

A guide to key recall facts (by year group)

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recognise and recite the number names to 5. Touch count to 3.	Have an understanding of numbers to 10 – name, order, value, more/less.	Recite the number names in order to 50 and beyond.	Recite the number names in order to 100. I know number bonds to 10. I know number bonds to 20.	I know number bonds for all numbers up to 20. Count in 50s and 100s.	I know number bonds to 100. Count in 25s and 1000s.	I know the multiplication and division facts for all times tables up to 12 × 12.	I know the multiplication and division facts for all times tables up to 12 × 12.
Recite the number names in order to 10. Touch count to 5.	Recognise quantities, without counting, up to 5. (Subitise)	I can add 0 or 1 to a number. I can add 2 to a number.	I know doubles and halves of numbers to 20. I know near doubles to 10. I can use bridging and compensation for addition to 10+10.	Count in 3s. I know the multiplication and division facts for the 3 times table. (up to 12x3)	Count in 6s. I know the multiplication and division facts for the 6 times table. (up to 12x6)	I can find factor pairs of a number.	I can identify common factors of a pair of numbers.
Use the language: before, after, next.	Compare sets of objects up to 10 in different contexts and say which is more or less.	I know odd and even numbers to 20. I know number bonds to 10.	Count in 2s. I know the multiplication and division facts for the 2 times table. (up to 12x2)	Count in 4s. I know the multiplication and division facts for the 4 times table. (up to 12x4)	Count in 9s and 11s. I know the multiplication and division facts for the 9 and 11 times tables. (up to 12x9 and 12x11)	I can identify prime numbers up to 20. I can recall square numbers up to 144 and their square roots.	I can identify prime numbers up to 50. Know the square roots of square numbers to 15 x 15
Sort objects and say which group is more/less. Name simple shapes.	Recall number bonds of numbers 0-5 and corresponding partitioning facts.	Count in 2s to 20. Count in 10s to 100. Count in 5s to 50.	Count in 5s and 10s. I know the multiplication and division facts for the 10 and 5 times table. (up to 12x10 and 12x5)	Count up and down in tenths. I can recognise decimal equivalents of tenths.	Count in 7s and 12s. I know the multiplication and division facts for the 7 and 12 times table. (up to 12x7 and 12x12)	Know the decimal and percentage equivalents of the fractions ½, ¼, ¾, ⅕, ⅖, tenths and fifths	Know the decimal and percentage equivalents of the fractions ½, ¼, ¾, ⅕, ⅖, tenths and fifths
Recite number names to 10.	Recall number bonds of numbers 0-10, including partitioning facts. Know some odd and even numbers to 10.	I can add 10 to a number.	Count in 3s to 36.	Count in 8s. I know the multiplication and division facts for the 8 times table. (up to 12x8)	I can recognise decimal equivalents of the fractions ½, ¼, ¾, tenths and hundredths.	I know decimal number bonds to 1 and 10.	Revisit previous KIRFS
Recite number names in order to 10.	Automatically recall doubles facts up to 5+5.	I know doubles and halves of numbers to 10. I know near doubles to 5.	To begin to know the 3 times tables. (up to 10x3)	I can multiply and divide 1 digit numbers by 10.	I can multiply and divide 1 and 2-digit numbers by 10 and 100.	Revisit previous KIRFS	Revisit previous KIRFS

Resources for developing fluency skills

CLIC
http://www.crablane.manchester.sch.uk/download/file/CLICchall20questions.pdf
Big Maths – Beat That
http://www.mathematicshed.com/uploads/1/2/5/7/12572836/bmbt_clic_tests.pdf

Deepening Understanding https://www.deepeningunderstanding.co.uk/
Username: a.charlesworth@stlawrence.sch.je
Password: Jerseyc0w! (morning work slides and 'Always, Sometimes, Never' may support Fluency sessions)

Third Space Learning – Fluent in Five Weeks (Y1-Y6) – free download
https://thirdspacelearning.com/resources/fluent-five-arithmetic-pack-weeks-1-6-years-3-6/

Corbett Maths – Five a Day (KS2)
https://corbettmathsprimary.com/5-a-day/

White Rose – Problem of the Day
https://whiterosemaths.com/resources/classroom-resources/problems/

KEY FLUENCY FACTS
Year 1, Autumn 1

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To be able to read and write numbers from 1 to 20 in numerals and words. When given a number, to identify one more and one less.

1+ 1 = 2	11 + 1= 12	1 – 1 = 0	11 – 1 = 10
2+ 1 = 3	12 + 1 = 13	2– 1 = 1	12 – 1 = 11
3 + 1 = 4	13+ 1 = 14	3 – 1= 2	13 – 1 = 12
4 + 1 = 5	14 + 1 = 15	4 – 1 = 3	14 – 1 = 13
5 + 1 = 6	15 + 1 = 16	5 – 1 = 4	15 – 1 = 14
6 + 1 = 7	16 + 1 = 17	6 – 1 = 5	16 – 1 = 15
7 + 1= 8	17 + 1 = 18	7 – 1 = 6	17 – 1 = 16
8 + 1 = 9	18 + 1 = 19	8 – 1 = 7	18 – 1 = 17
9 + 1 = 10	19 + 1= 20	9 – 1 = 8	19 – 1 = 18
10 + 1 = 11	20 + 1 = 21	10 – 1= 9	20 – 1 = 19

Key Vocabulary

15 **add** 1 ?

12 **subtract** 1 ?

What is 1 **more than** 12 ?

What is 20 **take away** 1 ?

What is 1 **less than** 15 ?

Children can practise answering these questions in any order, including missing number questions e.g. 19 + ? = 20 or 20 - ? = 19

Top Tips
The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

Use what you already know – Use number bonds to 10 (e.g. 7 + 1 = 8) to work out related number bonds to 20 (e.g. 17 + 1 = 18).

Use practical resources – Make collections of 20 objects. Ask questions such as, "How many more conkers would I have left if I took away one?"

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To be able to know number bonds up to ten.

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

Key Vocabulary

What do I **add** to 2 to make 6 ?

What is 10 **take away** 6 ?

What is 3 **less than** 9 ?

How many more than 2 is 10 ?

Children can practise answering these questions in any order, including missing number questions and related subtraction facts, with support if necessary.

e.g. 1 + ? = 10 or 9 – ? = 8.

Top Tips
The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

Use practical resources – Your child has one potato on their plate and you give them two more. Can they predict how many they will have now?

Make a poster – We use Numicon at school. You can find pictures of the Numicon shapes online – your child could make a poster showing the different ways of making 10.

Play games – Number Bond pairs or Number Bond 'Snap'.

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To be able to count in 2s, 5s and 10s and to recognise odd and even numbers.

Count forwards and backwards in steps of 2:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20
20, 18, 16, 14, 12, 10, 8, 6, 4, 2, 0
Count forwards and backwards in steps of 5:
5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60
60, 55, 50, 45, 40, 35, 30, 25, 20, 15, 10, 5, 0
Count forwards and backwards in steps of 10:
10, 20, 30, 40, 50, 60, 70, 80, 90, 100
100, 90, 80, 70, 60, 50, 40, 30, 20, 10, 0

Key Vocabulary

When we count in 2s are the answers **odd** or **even** ?

When we count in 5s are the answers **odd** or **even** ?

Children can practise counting in these steps, starting from different multiples e.g. count up in 10s, starting from 30 or count down in 2s, starting from 16, with support if necessary. Children can talk about patterns e.g. counting in 2s - all the numbers are even; counting in 10s - all the numbers end in 0; counting in 5s the numbers alternate between odd and even.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst walking to school or during a car journey ? You don't need to practise them all at once: perhaps you could have a counting step of the day.

Use practical resources – Use objects such as pasta shapes to make patterns in 2s, 5s and 10s. These can be arranged in arrays and then counted.

Use numberlines – Practise counting up and back in steps of 2, 5 and 10 on numberlines.

Songs and rhymes – There are lots of songs and counting rhymes available online.

Kim Banks

KEY FLUENCY FACTS
Year 1, Spring 2

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To begin to use number bonds to 20.

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 ?

Children can practise answering these questions in any order, including missing number questions e.g. 19 + ? = 20 or 20 - ? = 8

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

Use what you already know – Use number bonds to 10 (e.g. 7 + 3 = 10) to work out related number bonds to 20 (e.g. 17 + 3 = 20).
Use practical resources – Make collections of 20 objects. Ask questions such as, "How many more conkers would I need to make 20?"
Make a poster – We use Numicon at school. You can find pictures of the Numicon shapes online – your child could make a poster showing the different ways of making 20.
Play games – Number Bond pairs or Number Bond 'Snap'.

Kim Banks

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To begin to know doubles and halves of numbers to 20.

$0 + 0 = 0$	½ of $0 = 0$
$1 + 1 = 1$	½ of $2 = 1$
$2 + 2 = 4$	½ of $4 = 2$
$3 + 3 = 6$	½ of $6 = 3$
$4 + 4 = 8$	½ of $8 = 4$
$5 + 5 = 10$	½ of $10 = 5$
$6 + 6 = 12$	$10 + 10 = 20$
$7 + 7 = 14$	
$8 + 8 = 16$	
$9 + 9 = 18$	
$10 + 10 = 20$	

Key Vocabulary

What is **double** 6 ?

What is **half** of 20 ?

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

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.

The following game allows children to practise doubling and halving to 10 and 20:

http://www.topmarks.co.uk/maths-games/hit-the-button

KEY FLUENCY FACTS
Year 1, Summer 2

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To represent and use number bonds and related subtraction facts within 20 with one and two-digit numbers.

$4 + 5 = 9$
$5 + 4 = 9$
$9 - 5 = 4$
$9 - 4 = 5$

$8 + 12 = 20$
$12 + 8 = 20$
$20 - 8 = 12$
$20 - 12 = 8$

Key Vocabulary

What is 3 **add** 12 ?

What is 12 **plus** 3 ?

What is 15 **take away** 3 ?

What is 12 **less than 1**5 ?

Children can practise answering these questions in any order, including missing number questions e.g. $17 + ? = 20$ or $15 - ? = 17$

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these addition and subtraction number facts whilst 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.

Use what you already know – Use number bonds to 10 (e.g. $6 + 3 = 9$) to work out related number bonds to 20 (e.g. $16 + 3 = 19$).
Use practical resources – Make collections of 20 objects. Ask questions such as, "How many more conkers would I need to make 20?"
Make a poster – We use Numicon at school. You can find pictures of the Numicon shapes online – your child could make a poster showing the different ways of making 20.
Play games – This website helps children practise number bonds to 20:
http://www.ictgames.com/funkymum20.html

KEY FLUENCY FACTS
Year 2, Autumn 1

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know number bonds to 20.

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

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 ?

What is 15 **take away** 7 ?

How many more than 11 is 19 ?

Children can practise answering these questions in any order, including missing number questions e.g. 17 + ? = 20 or 20 - ? = 12.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

Use what you already know – Use number bonds to 10 (e.g. 6 + 4 = 10) to work out related number bonds to 20 (e.g. 16 + 4 = 20).

Use practical resources – Make collections of 20 objects. Ask questions such as, "How many more conkers would I need to make 20?"

Make a poster – We use Numicon at school. You can find pictures of the Numicon shapes online – your child could make a poster showing the different ways of making 20.

Play games – Number Bond pairs and Number Bond 'Snap'.

KEY FLUENCY FACTS
Year 2, Autumn 2

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the multiplication and division facts for the 2 times table.

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

Key Vocabulary

What is 2 **multiplied by** 7 ?

What is 2 **times** 9 ?

What is 12 **divided by** 2 ?

Children can practise answering these questions in any order, including missing number questions e.g. $2 \times ? = 8$ or $? \div 2 = 6$. Use practical resources or pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these times tables whilst walking to school or during a car journey ?

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 $2 \times 6 = 12$.

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.

Practise your times tables here: https://www.timestables.com/

Kim Banks

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To know doubles and halves of numbers to 20.

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

Key Vocabulary

What is **double** 9 ?

What is **half** of 14 ?

Children can practise answering missing number questions e.g. double ? = 16 or half of ? = 18 and doubles of multiples of 10 to 50 e.g. double 40, and corresponding halves. Use practical resources or pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

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.

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the 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 ?

Children can practise answering these questions in any order, including missing number questions e.g. 10 x ? = 80 or ? ÷ 10 = 6. Use practical resources or pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these times tables whilst walking to school or during a car journey ?

Pronunciation – Make sure that your child is pronouncing the numbers correctly and not getting confused between thirt**een** and thirt**y.**
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?

Practise your times tables here: https://www.timestables.com/

Kim Banks

KEY FLUENCY FACTS
Year 2, Summer 1

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know all pairs of multiples of 10 with totals up to 100 and what to add to any two-digit number to make the next multiple of 10.

$10 + 10 = 20$	$20 + 20 = 40$	$30 + 30 = 60$
$10 + 20 = 30$	$20 + 30 = 50$	$30 + 40 = 70$
$10 + 30 = 40$	$20 + 40 = 60$	$30 + 50 = 80$
$10 + 40 = 50$	$20 + 50 = 70$	$30 + 60 = 90$
$10 + 50 = 60$	$20 + 60 = 80$	$30 + 70 = 100$
$10 + 60 = 70$	$20 + 70 = 90$	$40 + 40 = 80$
$10 + 70 = 80$	$20 + 80 = 100$	$40 + 50 = 90$
$10 + 80 = 90$		$40 + 60 = 100$
$10 + 90 = 100$		$50 + 50 = 100$

Key Vocabulary

What do I **add** to 10 to make 50 ?

What is 70 **take away** 30 ?

What is 30 **less than** 80 ?

Children can practise answering missing number questions for the multiples of 10
e.g $10 + ? = 70$ or $50 + ? = 90$. Use practical resources or pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

Use what you already know – Encourage your child to find the connection between number bonds to 10 and number bonds of multiples of 10 to 100.

Ping Pong – In this game, the parent says, "Ping," and the child replies, "Pong." Then the parent says a multiple of 10 and the child says what you would add to it to make 100.

Kim Banks

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the multiplication and division facts for the 5 times table.

$5 \times 1 = 5$	$5 \div 5 = 1$
$5 \times 2 = 10$	$10 \div 5 = 2$
$5 \times 3 = 15$	$15 \div 5 = 3$
$5 \times 4 = 20$	$20 \div 5 = 4$
$5 \times 5 = 25$	$25 \div 5 = 5$
$5 \times 6 = 30$	$30 \div 5 = 6$
$5 \times 7 = 35$	$35 \div 5 = 7$
$5 \times 8 = 40$	$40 \div 5 = 8$
$5 \times 9 = 45$	$45 \div 5 = 9$
$5 \times 10 = 50$	$50 \div 5 = 10$
$5 \times 11 = 55$	$55 \div 5 = 11$
$5 \times 12 = 60$	$60 \div 5 = 12$

Key Vocabulary

What is 5 **multiplied by** 7 ?

What is 5 **times** 4 ?

What is 50 **divided by** 5 ?

Children can practise answering these questions in any order, including missing number questions e.g. 5 x ? = 40 or ? ÷ 5 = 9. Use practical resources or pictorial representations for support if necessary.

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.

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 picture stories to help children remember.

Practise your times tables here: https://www.timestables.com/

KEY FLUENCY FACTS
Year 3, Autumn 1

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know number bonds to and within 20.

$2 + 9 = 11$
$3 + 8 = 11$
$4 + 7 = 11$
$5 + 6 = 11$
$3 + 9 = 12$
$4 + 8 = 12$
$5 + 7 = 12$
$6 + 6 = 12$
$4 + 9 = 13$
$5 + 8 = 13$
$6 + 7 = 13$

$5 + 9 = 14$
$6 + 8 = 14$
$7 + 7 = 14$
$6 + 9 = 15$
$7 + 8 = 15$
$7 + 9 = 16$
$8 + 8 = 16$
$8 + 9 = 17$
$9 + 9 = 18$

$0 + 20 = 20$
$3 + 17 = 20$
$4 + 16 = 20$
$6 + 12 = 20$
$9 + 11 = 20$
$19 + 1 = 20$
$20 - 1 = 19$
$20 - 5 = 15$
$20 - 9 = 11$
$20 - 14 = 6$
$20 - 17 = 3$

Example of a fact family:
$6 + 9 = 15$
$9 + 6 = 15$
$15 - 9 = 6$
$15 - 9 = 6$
Examples of other facts to find families for:
$4 + 5 = 9$
$13 + 5 = 18$
$19 - 7 = 12$
$10 - 6 = 4$

Key Vocabulary

What do I **add** to 5 to make 19 ?

What is 17 **take away** 6 ?

What is 13 **less than** 15 ?

How many more than 8 is 11 ?

What is the **difference** between 9 and 13 ?

Children will be working towards knowing **all** number bonds for each number to 20 e.g. $15 + 2 = 17$. This includes related subtraction facts e.g. $17 - 2 = 15$. Use practical resources and pictorial representatives for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

Buy one get three free - If your child knows one fact (e.g. 8 + 5 = 13), can they tell you the other three facts in the same fact family?
Use doubles and near doubles – If you know that 6 + 6 = 12, how can you work out 6 + 7? What about 5 + 7?

Kim Banks

KEY FLUENCY FACTS
Year 3, Autumn 2

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the multiplication and division facts for the 3 times table.

$3 \times 1 = 3$	$1 \times 3 = 3$	$3 \div 3 = 1$	$3 \div 1 = 3$
$3 \times 2 = 6$	$2 \times 3 = 6$	$6 \div 3 = 2$	$6 \div 2 = 3$
$3 \times 3 = 9$	$3 \times 3 = 9$	$9 \div 3 = 3$	$9 \div 3 = 3$
$3 \times 4 = 12$	$4 \times 3 = 12$	$12 \div 3 = 4$	$12 \div 4 = 3$
$3 \times 5 = 15$	$5 \times 3 = 15$	$15 \div 3 = 5$	$15 \div 5 = 3$
$3 \times 6 = 18$	$6 \times 3 = 18$	$18 \div 3 = 6$	$18 \div 6 = 3$
$3 \times 7 = 21$	$7 \times 3 = 21$	$21 \div 3 = 7$	$21 \div 7 = 3$
$3 \times 8 = 24$	$8 \times 3 = 24$	$24 \div 3 = 8$	$24 \div 8 = 3$
$3 \times 9 = 27$	$9 \times 3 = 27$	$27 \div 3 = 9$	$27 \div 9 = 3$
$3 \times 10 = 30$	$10 \times 3 = 30$	$30 \div 3 = 10$	$30 \div 10 = 3$
$3 \times 11 = 33$	$11 \times 3 = 33$	$33 \div 3 = 11$	$33 \div 11 = 3$
$3 \times 12 = 36$	$12 \times 3 = 36$	$36 \div 3 = 12$	$36 \div 12 = 3$

Key Vocabulary

What is 3 **multiplied by** 8 ?

What is 8 **times** 3 ?

What is 24 **divided by** 3 ?

Children can practise answering these questions in any order, including missing number questions e.g.   3 x ? = 18 or ? ÷ 3 = 11.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these times tables whilst walking to school or during a car journey?

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.

Buy one get three free – If your child knows one fact (e.g. 3 × 5 = 15), 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. 3 × 12 = 36. The answer to the multiplication is 36, so 36 ÷ 3 = 12 and 36 ÷ 12 = 3

Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some picture stories to help children remember.

Practise your times tables here: https://www.timestables.com/

Kim Banks

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the sums and differences of all pairs of multiples of 10 or 100 and what to add to any two-digit number to make 100.

$10 + 90 = 100$

$20 + 60 = 80$

$30 + 80 = 110$

$40 + 70 = 110$

$50 + 80 = 130$

$120 - 90 = 30$

$140 - 70 = 70$

$150 - 90 = 60$

$110 - 80 = 30$

$130 - 50 = 80$

$71 + ? = 100$

$39 + ? = 100$

$45 + ? = 100$

$17 + ? = 100$

$92 + ? = 100$

$53 + ? = 100$

$26 + ? = 100$

$64 + ? = 100$

$88 + ? = 100$

Key Vocabulary

What do I **add** to 30 to make 110 ?

What is 140 **take away** 50 ?

What is 30 **less than** 80 ?

Children can practise answering missing number questions for the multiples of 100 e.g. $100 + ? = 700$ or $1100 - ? = 500$ and addition doubles for multiples of 10 to 100 e.g. $90 + 90$. Use pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

Use what you already know – Encourage your child to find the connection between number bonds to 20 and number bonds of multiples of 10 or 100.

Ping Pong – In this game, the parent says, "Ping," and the child replies, "Pong." Then the parent says a two-digit number and the child says what you would add to it to make 100.

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the multiplication and division facts for the 4 times table.

$4 \times 1 = 4$	$1 \times 4 = 4$	$4 \div 4 = 1$	$4 \div 1 = 4$
$4 \times 2 = 8$	$2 \times 4 = 8$	$8 \div 4 = 2$	$8 \div 2 = 4$
$4 \times 3 = 12$	$3 \times 4 = 12$	$12 \div 4 = 3$	$12 \div 3 = 4$
$4 \times 4 = 16$	$4 \times 4 = 16$	$16 \div 4 = 4$	$16 \div 4 = 4$
$4 \times 5 = 20$	$5 \times 4 = 20$	$20 \div 4 = 5$	$20 \div 5 = 4$
$4 \times 6 = 24$	$6 \times 4 = 24$	$24 \div 4 = 6$	$24 \div 6 = 4$
$4 \times 7 = 28$	$7 \times 4 = 28$	$28 \div 4 = 7$	$28 \div 7 = 4$
$4 \times 8 = 32$	$8 \times 4 = 32$	$32 \div 4 = 8$	$32 \div 8 = 4$
$4 \times 9 = 36$	$9 \times 4 = 36$	$36 \div 4 = 9$	$36 \div 9 = 4$
$4 \times 10 = 40$	$10 \times 4 = 40$	$40 \div 4 = 10$	$40 \div 10 = 4$
$4 \times 11 = 44$	$11 \times 4 = 44$	$44 \div 4 = 11$	$44 \div 11 = 4$
$4 \times 12 = 48$	$12 \times 4 = 48$	$48 \div 4 = 12$	$48 \div 12 = 4$

Key Vocabulary

What is 4 **multiplied by** 6 ?

What is 8 **times** 4 ?

What is 24 **divided by** 4 ?

Children can practise answering these questions in any order, including missing number questions e.g. 4 x ? = 16 or ? ÷ 4 =7. Use pictorial representatives for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these times tables whilst walking to school or during a car journey?

What do you already know? – Your child will already know many of these facts from the 2, 3, 5 and 10 times tables.
Double and double again – Multiplying a number by 4 is the same as doubling and doubling again. Double 6 is 12 and double 12 is 24, so $6 \times 4 = 24$.
Buy one get three free – If your child knows one fact (e.g. $12 \times 4 = 48$), can they tell you the other three facts in the same fact family?
Play games – This website is a game to help practise the 4 times table:
http://www.mad4maths.com/4_x_multiplication_table_math_game/

Practise your times tables here: https://www.timestables.com/

Kim Banks

KEY FLUENCY FACTS
Year 3, Summer 1

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To learn to tell the time.

Children can practise telling the time using a clock with hands. This target can be broken down into several steps.

▸ I can tell the time to the nearest hour.
▸ I can tell the time to the nearest half hour.
▸ I can tell the time to the nearest quarter hour.
▸ I can tell the time to the nearest five minutes.
▸ I can tell the time to the nearest minute.

Key Vocabulary
Twelve **o'clock**
Half past two
Quarter past three
Quarter to nine
Five **past** one
Twenty-five **to** ten

Top Tips

The secret to success is practising **little** and **often**.

Talk about time - Discuss what time things happen. When does your child wake up? What time do they eat breakfast? Make sure that you have an analogue clock visible in your house or that your child wears a watch with hands. Once your child is confident telling the time, see if you can find more challenging clocks e.g. with Roman numerals or no numbers marked.

Ask your child the time regularly – You could also give your child some responsibility for watching the clock :

"The cakes need to come out of the oven at twenty-two minutes past four exactly."

"We need to leave the house at twenty-five to nine."

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the multiplication and division facts for the 8 times table.

$8 \times 1 = 8$	$1 \times 8 = 8$	$8 \div 8 = 1$	$8 \div 1 = 8$
$8 \times 2 = 16$	$2 \times 8 = 16$	$16 \div 8 = 2$	$16 \div 2 = 8$
$8 \times 3 = 24$	$3 \times 8 = 24$	$24 \div 8 = 3$	$24 \div 3 = 8$
$8 \times 4 = 32$	$4 \times 8 = 32$	$32 \div 8 = 4$	$32 \div 4 = 8$
$8 \times 5 = 40$	$5 \times 8 = 40$	$40 \div 8 = 5$	$40 \div 5 = 8$
$8 \times 6 = 48$	$6 \times 8 = 48$	$48 \div 8 = 6$	$48 \div 6 = 8$
$8 \times 7 = 56$	$7 \times 8 = 56$	$56 \div 8 = 7$	$56 \div 7 = 8$
$8 \times 8 = 64$	$8 \times 8 = 64$	$64 \div 8 = 8$	$64 \div 8 = 8$
$8 \times 9 = 72$	$9 \times 8 = 72$	$72 \div 8 = 9$	$72 \div 9 = 8$
$8 \times 10 = 80$	$10 \times 8 = 80$	$80 \div 8 = 10$	$80 \div 10 = 8$
$8 \times 11 = 88$	$11 \times 8 = 88$	$88 \div 8 = 11$	$88 \div 11 = 8$
$8 \times 12 = 96$	$12 \times 8 = 96$	$96 \div 8 = 12$	$96 \div 12 = 8$

Key Vocabulary

What is 8 **multiplied by** 6 ?

What is 8 **times** 8 ?

What is 24 **divided by** 8 ?

Children can practise answering these questions in any order, including missing number questions e.g. $8 \times ? = 16$ or $? \div 8 = 7$. Use pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these times tables whilst walking to school or during a car journey ?

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 fours – Multiplying a number by 8 is the same as multiply by 4 and then doubling the answer. $8 \times 4 = 32$ and double 32 is 64, so $8 \times 8 = 64$.

Five six seven eight – fifty-six is seven times eight ($56 = 7 \times 8$).

Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some picture stories to help children remember.

Practise your times tables here: https://www.timestables.com/

KEY FLUENCY FACTS
Year 4, Autumn 1

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the sums and differences of all pairs of multiples of 10, 100 and 1000 and what to add to any three-digit number to make the next multiple of 100. I also know doubles of numbers 1 to 100 and corresponding halves and doubles of multiples of 10 and 100 and corresponding halves.

$30 + 80 = 110$	$521 + ? = 600$	$60 \times 2 = 120$
$50 + 70 = 120$	$479 + ? = 500$	$170 \times 2 = 340$
$120 - 40 = 80$	$355 + ? = 400$	$560 \times 2 = 1120$
$240 - 150 = 90$	$872 + ? = 900$	$160 \div 2 = 80$
$400 + 500 = 900$	$788 + ? = 800$	$240 \div 2 = 120$
$800 + 700 = 1500$	$964 + ? = 1000$	$380 \div 2 = 190$
$1200 - 800 = 400$	$213 + ? = 300$	$400 \times 2 = 800$
$1700 - 900 = 800$	$38 \times 2 = 76$	$600 \times 2 = 1200$
$3000 + 7000 = 10,000$	$64 \times 2 = 128$	$900 \times 2 = 1800$
$4000 + 9000 = 13,000$	$72 \div 2 = 36$	$800 \div 2 = 400$
$14,000 - 5000 = 9000$	$96 \div 2 = 48$	$1600 \div 2 = 800$
$16,000 - 8000 = 8000$		$1200 \div 2 = 600$

Key Vocabulary

What do I **add** to 50 to make 120 ?

What do I **add** to 479 to make 500 ?

What is 1700 **take away** 900 ?

What is 500 **less than** 14,000 ?

What is double 38 ?

What is half of 16,000?

Children can practise answering missing number questions
e.g. $400 + ? = 1300$ or $14,000 - ? = 9000$. Use practical resources and pictorial representations for support if necessary.

Top Tips
The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

Use what you already know – Encourage your child to find the connection between number bonds to 20 and number bonds of multiples of 10, 100 and 1000.

Ping Pong – In this game, the parent says, "Ping," and the child replies, "Pong." Then the parent says a two-digit number and the child says what you would add to it to make the next multiple of 100.

Kim Banks   24

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the multiplication and division facts for the 6 times table.

$6 \times 1 = 6$	$1 \times 6 = 6$	$6 \div 6 = 1$	$6 \div 1 = 6$
$6 \times 2 = 12$	$2 \times 6 = 12$	$12 \div 6 = 2$	$12 \div 2 = 6$
$6 \times 3 = 18$	$3 \times 6 = 18$	$18 \div 6 = 3$	$18 \div 3 = 6$
$6 \times 4 = 24$	$4 \times 6 = 24$	$24 \div 6 = 4$	$24 \div 4 = 6$
$6 \times 5 = 30$	$5 \times 6 = 30$	$30 \div 6 = 5$	$30 \div 5 = 6$
$6 \times 6 = 36$	$6 \times 6 = 36$	$36 \div 6 = 6$	$36 \div 6 = 6$
$6 \times 7 = 42$	$7 \times 6 = 42$	$42 \div 6 = 7$	$42 \div 7 = 6$
$6 \times 8 = 48$	$8 \times 6 = 48$	$48 \div 6 = 8$	$48 \div 8 = 6$
$6 \times 9 = 54$	$9 \times 6 = 54$	$54 \div 6 = 9$	$54 \div 9 = 6$
$6 \times 10 = 60$	$10 \times 6 = 60$	$60 \div 6 = 10$	$60 \div 10 = 6$
$6 \times 11 = 66$	$11 \times 6 = 66$	$66 \div 6 = 11$	$66 \div 11 = 6$
$6 \times 12 = 72$	$12 \times 6 = 72$	$72 \div 6 = 12$	$72 \div 12 = 6$

Key Vocabulary

What is 6 **multiplied by** 8 ?

What is 6 **times** 6 ?

What is 24 **divided by** 6 ?

Children can practise answering these questions in any order, including missing number questions e.g. 6 x ? = 72 or ? ÷ 6 =7. Use practical resources and pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these times tables whilst walking to school or during a car journey ?

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 multiply by 3 and then doubling the answer. $8 \times 3 = 24$ and double 24 is 48, so $8 \times 6 = 48$.

Buy one get three free – If your child knows one fact (e.g. $3 \times 6 = 18$), can they tell you the other three facts in the same fact family?

Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some picture stories to help children remember.

Practise your times tables here: https://www.timestables.com/

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To be able to round any number to the nearest 10, 100 or 1000 and round decimals with one decimal place to the nearest whole number.

Round to nearest 10
37 -> 40
63 -> 60
45 -> 50
221 -> 220
573 -> 570
648 -> 650

Round to nearest 100
460 -> 500
740 -> 700
2080 -> 2100
4519 -> 4500
6972 -> 7000

Round to nearest 1000
5267 -> 5000
4963 -> 5000
7099 -> 7000
67, 542 -> 68, 000
55,455 -> 55,000

Round to nearest whole number
4.6 -> 5
5.4 -> 5
45.7 -> 46
68.5 -> 69
56.1 -> 56
78.9 -> 79

Key Vocabulary

What is 37 rounded to the nearest 10 ?

What is 6897 rounded to the nearest 100 ?

What is 54,987 rounded to the nearest thousand ?

What is 75.4 rounded to the nearest whole number ?

Children can practise thinking of a range of numbers that will round to a given answer e.g. when rounding to the nearest ten what is the largest/smallest number that will round to 60 ? Use pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst walking to school or during a car journey ?

Look for patterns – Talk to your child about what happens when rounding with digits with 0 to 4 or 5 to 9 in the significant column. The following website gives some rules for rounding:

https://www.mathsisfun.com/rounding-numbers.html

Practise online – Go to http://www.topmarks.co.uk/Flash.aspx?f=DartboardRoundingv2 or http://mathszone.co.uk/count-and-understand/rounding/to practise rounding numbers.

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the multiplication and division facts for the 7 times table.

$7 \times 1 = 7$	$1 \times 7 = 7$	$7 \div 7 = 1$	$7 \div 1 = 7$
$7 \times 2 = 14$	$2 \times 7 = 14$	$14 \div 7 = 2$	$14 \div 2 = 7$
$7 \times 3 = 21$	$3 \times 7 = 21$	$21 \div 7 = 3$	$21 \div 3 = 7$
$7 \times 4 = 28$	$4 \times 7 = 28$	$28 \div 7 = 4$	$28 \div 4 = 7$
$7 \times 5 = 35$	$5 \times 7 = 35$	$35 \div 7 = 5$	$35 \div 5 = 7$
$7 \times 6 = 42$	$6 \times 7 = 42$	$42 \div 7 = 6$	$42 \div 6 = 7$
$7 \times 7 = 49$	$7 \times 7 = 49$	$49 \div 7 = 7$	$49 \div 7 = 7$
$7 \times 8 = 56$	$8 \times 7 = 56$	$56 \div 7 = 8$	$56 \div 8 = 7$
$7 \times 9 = 63$	$9 \times 7 = 63$	$63 \div 7 = 9$	$63 \div 9 = 7$
$7 \times 10 = 70$	$10 \times 7 = 70$	$70 \div 7 = 10$	$70 \div 10 = 7$
$7 \times 11 = 77$	$11 \times 7 = 77$	$77 \div 7 = 11$	$77 \div 11 = 7$
$7 \times 12 = 84$	$12 \times 7 = 84$	$84 \div 7 = 12$	$84 \div 12 = 7$

Key Vocabulary

What is 7 **multiplied by** 6 ?

What is 7 **times** 8 ?

What is 84 **divided by** 7 ?

Children can practise answering these questions in any order, including missing number questions e.g. 7 x ? = 28 or ? ÷ 6=7. Use pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these times tables whilst walking to school or during a car journey?

Songs and Chants – You can buy Times Tables CDs or find multiplication songs and chants online e.g on Mathletics. If your child creates their own song, this can make the times tables even more memorable.
Order of difficulty – Ask your child to order these facts from the easiest to the most challenging. Can they explain why some facts are easier to remember? Then focus on practising the most challenging facts.
Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some picture stories to help children remember.
On line - There are tables games at the following website:
http://resources.woodlands-junior.kent.sch.uk/maths/timestable/interactive.htm
Practise your times tables here: https://www.timestables.com/

Kim Banks

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To multiply and divide one and two-digit numbers by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. I can recognise decimal equivalents of fractions.

$7 \times 10 = 70$	$6 \times 100 = 600$	$\frac{1}{2} = 0.5$
$4 \times 10 = 40$	$4 \times 100 = 400$	$\frac{1}{4} = 0.25$
$56 \times 10 = 560$	$48 \times 100 = 4800$	$\frac{3}{4} = 0.75$
$73 \times 10 = 730$	$62 \times 100 = 6200$	$\frac{1}{10} = 0.1$
$80 \div 10 = 8$	$70 \div 100 = 0.7$	$\frac{5}{10} = 0.5$
$50 \div 10 = 5$	$20 \div 100 = 0.2$	$\frac{1}{100} = 0.01$
$3 \div 10 = 0.3$	$56 \div 100 = 0.56$	$\frac{2}{10} = 0.2$
$9 \div 10 = 0.9$	$48 \div 100 = 0.48$	$\frac{7}{100} = 0.07$
$28 \div 10 = 2.8$	$4 \div 100 = 0.04$	$\frac{75}{100} = 0.75$
$45 \div 10 = 4.5$	$6 \div 100 = 0.06$	

Key Vocabulary

What is 5 **multiplied by** 10 ?

What is 10 **times** 0.9 ?

What is 70 **divided by** 10 ?

hundreds, tens, ones

tenths, hundredths

How would you write 48/100 as a decimal ?

Children can practise answering these questions in any order, including missing number questions e.g. 10 × ? = 5 or ? ÷ 10 = 60. Children can practise converting between decimals and fractions for ½, ¼, ¾ and any number of tenths and hundredths. Use pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst walking to school or during a car journey ?

It is important to refer to the digits, rather than the decimal point, moving when multiplying or dividing by 10 or 100. Using the following place value chart: http://www.greatmathsteachingideas.com/wp-content/uploads/2012/02/Multiplying-and-dividing-by-10-100-and-1000.pdf and writing the number on the chart first can help pupils see how the decimal point remains fixed and the digits shift left if multiplying and right if dividing.

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.

Kim Banks

KEY FLUENCY FACTS
Year 4, Summer 2

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the multiplication and division facts for the 9 and 11 times tables.

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

Key Vocabulary

What is 9 **multiplied by** 8 ?

What is 11 **times** 8 ?

What is 110 **divided by** 11 ?

Children can practise answering these questions in any order, including missing number questions e.g. $9 \times ? = 54$ or $? \div 9 = 11$. Use pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these times tables whilst walking to school or during a car journey ?

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. $7 \times 10 - 7 = 70 - 7 = 63$). What do you notice?

What happens if you add your original number instead?

(e.g. $7 \times 10 + 7 = 70 + 7 = 77$)

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!

Practise your times tables here: https://www.timestables.com/

KEY FLUENCY FACTS
Year 5, Autumn 1

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the multiplication and division facts for the 12 times table.

$12 \times 1 = 12$	$1 \times 12 = 12$	$12 \div 12 = 1$	$12 \div 1 = 12$
$12 \times 2 = 24$	$2 \times 12 = 24$	$24 \div 12 = 2$	$24 \div 2 = 12$
$12 \times 3 = 36$	$3 \times 12 = 36$	$36 \div 12 = 3$	$36 \div 3 = 12$
$12 \times 4 = 48$	$4 \times 12 = 48$	$48 \div 12 = 4$	$48 \div 4 = 12$
$12 \times 5 = 60$	$5 \times 12 = 60$	$60 \div 12 = 5$	$60 \div 5 = 12$
$12 \times 6 = 72$	$6 \times 12 = 72$	$72 \div 12 = 6$	$72 \div 6 = 12$
$12 \times 7 = 84$	$7 \times 12 = 84$	$84 \div 12 = 7$	$84 \div 7 = 12$
$12 \times 8 = 96$	$8 \times 12 = 96$	$96 \div 12 = 8$	$96 \div 8 = 12$
$12 \times 9 = 108$	$9 \times 12 = 108$	$108 \div 12 = 9$	$108 \div 9 = 12$
$12 \times 10 = 120$	$10 \times 12 = 120$	$120 \div 12 = 10$	$120 \div 10 = 12$
$12 \times 11 = 132$	$11 \times 12 = 132$	$132 \div 12 = 11$	$132 \div 11 = 12$
$12 \times 12 = 144$	$12 \times 12 = 144$	$144 \div 12 = 12$	$144 \div 12 = 12$

Key Vocabulary

What is 12 **multiplied by** 6 ?

What is 12 **times** 12 ?

What is 72 **divided by** 12 ?

Children can practise answering these questions in any order, including missing number questions e.g. $12 \times ? = 96$ or $? \div 12 = 11$. Use pictorial representations for support where necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these times tables whilst walking to school or during a car journey?

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 sixes – Multiplying a number by 12 is the same as multiply by 6 and then doubling the answer. $6 \times 4 = 24$ and double 24 is 48, so $12 \times 4 = 48$.

Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some picture stories to help children remember.

Practise your times tables here: https://www.timestables.com/

KEY FLUENCY FACTS
Year 5, Autumn 2

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.

$5 \times 10 = 50$	$7 \times 100 = 700$	$4 \times 1000 = 4000$
$80 \div 10 = 8$	$900 \div 100 = 9$	$2000 \div 1000 = 2$
$23 \times 10 = 230$	$84 \times 100 = 8400$	$72 \times 1000 = 72{,}000$
$97 \div 10 = 9.7$	$72 \div 100 = 0.72$	$8540 \div 1000 = 8.54$
$217 \times 10 = 2170$	$589 \times 100 = 58{,}900$	$423 \times 1000 = 423{,}000$
$456 \div 10 = 45.6$	$312 \div 100 = 3.12$	$601 \div 1000 = 0.601$
$6.4 \times 10 = 64$	$2.8 \times 100 = 280$	$8.7 \times 1000 = 8700$
$7.8 \div 10 = 0.78$	$697 \div 100 = 6.97$	$5328 \div 1000 = 5.238$
$2.85 \times 10 = 28.5$	$4.76 \times 100 = 476$	$6.75 \times 1000 = 6750$
$67.1 \div 10 = 6.71$	$189 \div 100 = 1.89$	$1924 \div 1000 = 1.924$

Key Vocabulary

What is 5 **multiplied by** 10 ?

What is 100 **times** 0.9 ?

What is 723 **divided by** 1000 ?

hundreds, tens, ones

tenths, hundredths, thousandths

Children can practise answering these questions in any order, including missing number questions e.g. $100 \times ? = 5$ or $? \div 1000 = 0.645$.   Use pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst walking to school or during a car journey ? You don't need to practise them all at once: perhaps you could have a fact family of the day.

It is important to refer to the digits, rather than the decimal point, moving when multiplying or dividing by 10 or 100. Using the following place value chart: http://www.greatmathsteachingideas.com/wp-content/uploads/2012/02/Multiplying-and-dividing-by-10-100-and-1000.pdf and writing the number on the chart first can help pupils see how the decimal point remains fixed and the digits shift left if multiplying and right if dividing.

Play games – This website is an activity to help practise multiplying and dividing by 10, 100 and 1000: http://mathsframe.co.uk/en/resources/resource/31/multiply_and_divide_by_10_100_and_1000_2

Practise your times tables here: https://www.timestables.com/
Kim Banks

KEY FLUENCY FACTS
Year 5, Spring 1

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000 and can round decimals with two decimal places to the nearest whole number and to one decimal place.

Round to nearest 10
675-> 680
6583 -> 6580
541,987 -> 541,990

Round to nearest 100
450 -> 500
3487 -> 3500
897,987 -> 898,000

Round to nearest 1000
6754 -> 7000
987,576 -> 988,000
2,909,601 -> 2,910,000

Round to nearest 10,000
67,944 -> 70,000
439,488 -> 440,000
6,654,349 -> 6,650,000

Round to nearest 100,000
456,998 -> 500,000
242,657 -> 200,000
3,958,993 ->4,000,000

Round to nearest whole
5.8 -> 6
54.67 -> 55
659.98 -> 660

Round to one decimal place
45.92 -> 45.9
123.843 -> 123.8
67.964 -> 68

Key Vocabulary

What is 789 rounded to the nearest 10?

What is 15,786 rounded to the nearest 100 ?

What is 987,451 rounded to the nearest thousand ?

What is 4,505,652 rounded to the nearest ten thousand ?

What is 2,945,789 rounded to the nearest hundred thousand ?

What is 671.48 rounded to the nearest whole number ?

What is 981.78 rounded to one decimal place ?

Children can practise giving a range of numbers that will round to a given answer e.g. when rounding to the nearest thousand what is the largest/smallest number that will round to 5000 ?

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst walking to school or during a car journey ?

Look for patterns – Talk to your child about what happens when rounding with digits with 0 to 4 or 5 to 9 in the significant column. The following website gives some rules for rounding:
https://www.mathsisfun.com/rounding-numbers.html

King Banks Practise online – To practise rounding go to:
http://mathszone.co.uk/count-and-understand/rounding/
https://uk.ixl.com/math/year-6/rounding

KEY FLUENCY FACTS
Year 5, Spring 2

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know decimal number bonds to 1 and 10. To be able to double and halve decimal numbers with one decimal place. To know what must be added to any four-digit number to make the next multiple of 1000.

Some examples:

$0.6 + 0.4 = 1$	$3.7 + 6.3 = 10$	$3.4 \times 2 = 6.8$	$4087 + ? = 5000$
$0.4 + 0.6 = 1$	$6.3 + 3.7 = 10$	$6.7 \times 2 = 13.4$	$3091 + ? = 4000$
$1 - 0.4 = 0.6$	$10 - 6.3 = 3.7$	$5.9 \times 2 = 11.8$	$2234 + ? = 3000$
$1 - 0.6 = 0.4$	$10 - 3.7 = 6.3$	$7.6 \times 2 = 13.2$	$5678 + ? = 6000$
$0.7 + 0.3 = 1$	$4.8 + 5.2 = 10$	$4.8 \div 2 = 2.4$	$9821 + ? = 10,000$
$0.3 + 0.7 = 1$	$5.2 + 4.8 = 10$	$5.6 \div 2 = 2.8$	
$1 - 0.2 = 0.8$	$10 - 5.2 = 4.8$	$7.8 \div 2 = 3.9$	
$1 - 0.8 = 0.2$	$10 - 4.8 = 5.2$	$11.2 \div 2 = 5.6$	

Key Vocabulary

What do I **add** to 0.8 to make 1 ?

What is 1 **take away** 0.6 ?

What is 1.3 **less than** 10 ?

How many more than 9.8 is 10 ?

What is the **difference** between 2341 and 3000 ?

Children can practise answering questions including missing number questions e.g. 0.4 + ? = 10 or 7.2 + ? = 10. Use pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

Buy one get three free - If your child knows one fact (e.g. 0.8 + 0.2 = 1), can they tell you the other three facts in the same fact family?

Use number bonds to 10 - How can number bonds to 10 help you work out number bonds to 1?

Play games – There is a game for ordering decimals at
https://www.topmarks.co.uk/ordering-and-sequencing/coconut-ordering

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To be able to identify prime numbers up to 20. To be able to recall square numbers up to 12^2 and their square roots.

A prime number is a number with no factors other than itself and one.
The following numbers are prime numbers: 2, 3, 5, 7, 11, 13, 17, 19

$1^2 = 1 \times 1 = 1$
$2^2 = 2 \times 2 = 4$
$3^2 = 3 \times 3 = 9$
$4^2 = 4 \times 4 = 16$
$5^2 = 5 \times 5 = 25$
$6^2 = 6 \times 6 = 36$
$7^2 = 7 \times 7 = 49$
$8^2 = 8 \times 8 = 64$
$9^2 = 9 \times 9 = 81$
$10^2 = 10 \times 10 = 100$
$11^2 = 11 \times 11 = 121$
$12^2 = 12 \times 12 = 144$

$\sqrt{1} = 1$
$\sqrt{4} = 2$
$\sqrt{9} = 3$
$\sqrt{16} = 4$
$\sqrt{25} = 5$
$\sqrt{36} = 6$
$\sqrt{49} = 7$
$\sqrt{64} = 8$
$\sqrt{81} = 9$
$\sqrt{100} = 10$
$\sqrt{121} = 11$
$\sqrt{144} = 12$

Key Vocabulary

prime number

composite number

factor

multiple

What is 8 squared ?

What is 7 multiplied by itself ?

What is the square root of 144 ?

Is 81 a square number ?

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number factss whilst 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.

Make a set of cards for the numbers from 2 to 20. How quickly can your child sort these into prime and composite numbers (not prime)? How many even prime numbers can they find? How many odd composite numbers?

Cycling Squares – At http://nrich.maths.org/1151 there is a challenge involving square numbers. Can you complete the challenge and then create your own examples?

Kim Banks

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To be able to convert between decimals, fractions and percentages.

$\frac{1}{2} = 0.5 = 50\%$

$\frac{1}{4} = 0.25 = 25\%$

$\frac{3}{4} = 0.75 = 75\%$

$\frac{1}{5} = 0.2 = 20\%$

$\frac{2}{5} = 0.4 = 40\%$

$\frac{4}{5} = 0.8 = 80\%$

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

$\frac{9}{10} = 0.9 = 90\%$

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

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

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

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

Key Vocabulary

How many **tenths** is 0.8 ?

How many **hundredths** is 0.12 ?

Write 0.75 as a **percentage**.

Write ¼ as a **decimal**.

Write 80% as a **fraction**.

Children can practise finding fractions of numbers or quantities. For example: 2/3 of 27 or 4/5 of 70kg. They can explore how to be able to find 50%, 25% and 10% of numbers or quantities such as: 25% of 20kg or 10% of £80. Use practical resources or pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst walking to school or during a car journey ? You don't need to practise them all at once: start with tenths before moving on to hundredths.

Play games - Make some cards with pairs of equivalent fractions, decimals and percentages. Use these to play the memory game or snap. Or make your own dominoes with fractions on one side and decimals or percentages on the other.
Practise online – Go to:
http://mathsframe.co.uk/en/resources/resource/120/match_fractions_decimals_and_percentages#.UCdcd2MsCEY

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the multiplication and division facts for all times tables up to 12 × 12 and can give factor pairs for a given number. To be able to multiply pairs of multiple of 10 and a multiple of 100 by a single digit number and divide a multiple of 10 by a single digit number.

12 x 6 = 72	24 = 4 × 6	60 x 30 = 1800
8 x 7 = 56	24 = 8 × 3	40 x 50 = 2000
9 x 7 = 63	56 = 7 × 8	80 ÷ 4 = 20
6 x 11 = 66	54 = 9 × 6	270 ÷ 3 = 90
132 ÷12 = 11	42 = 6 × 7	900 x 8 = 7200
72 ÷ 9 = 8	25 = 5 × 5	500 x 8 = 4000
96 ÷ 12 = 8	84 = 7 × 12	
108 ÷ 9 = 12	15 = 5 × 3	

Key Vocabulary

Can you find a **factor** of 28 ?

Find two numbers whose **product** is 20.

I know that 6 is a factor of 72 because 6 multiplied by 12 equals 72.

Children can practise answering tables questions in any order, including missing number questions e.g. 12 × ? = 84 or ? ÷ 6 = 7. They can practise listing all factor pairs for a given number e.g. for 12 the factor pairs are: 1 x 12, 2 x 6, 3 x 4. Use practical resources and pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

Play games -
http://www.arcademics.com/games/meteor/meteor.html is a game to practise multiplication facts.
Think of the question – One player thinks of a times table question (e.g. 4 × 12) and states the answer. The other player has to guess the original question.
Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some picture stories to help children remember.

Practise your times tables here: https://www.timestables.com/

Kim Banks

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To be able to multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.

$6 \times 10 = 60$	$7 \times 100 = 700$	$3 \times 1000 = 3000$
$90 \div 10 = 9$	$500 \div 100 = 5$	$9000 \div 1000 = 9$
$46 \times 10 = 460$	$79 \times 100 = 7900$	$65 \times 1000 = 65,000$
$49 \div 10 = 4.9$	$53 \div 100 = 0.53$	$7050 \div 1000 = 7.05$
$348 \times 10 = 3480$	$831 \times 100 = 83,100$	$912 \times 1000 = 912,000$
$672 \div 10 = 67.2$	$673 \div 100 = 6.73$	$563 \div 1000 = 0.563$
$5.3 \times 10 = 53$	$6.2 \times 100 = 620$	$9.2 \times 1000 = 9200$
$12.6 \div 10 = 1.26$	$703 \div 100 = 7.03$	$4106 \div 1000 = 4.106$
$4.89 \times 10 = 48.9$	$6.32 \times 100 = 632$	$8.35 \times 1000 = 8350$
$3.24 \div 10 = 0.324$	$782 \div 100 = 7.82$	$5217 \div 1000 = 5.217$

Key Vocabulary

What is 7 **multiplied by** 10?

What is 100 **times** 0.7?

What is 654 **divided by** 1000?

hundreds, tens, ones

tenths, hundredths, thousandths

For questions which have answers more than three decimal places, children can practise rounding answers to the nearest thousandth e.g. $34.23 \div 1000 = 0.03423$ would round to 0.034, $5.67 \div 1000 = 0.00567$ would round to 0.006

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst walking to school or during a car journey ? You don't need to practise them all at once: perhaps you could have a fact family of the day. Use practical resources and pictorial representations for support if necessary.

It is important to refer to the digits, rather than the decimal point, moving when multiplying or dividing by 10 or 100. Using the following place value chart: http://www.greatmathsteachingideas.com/wp-content/uploads/2012/02/Multiplying-and-dividing-by-10-100-and-1000.pdf and writing the number on the chart first can help pupils see how the decimal point remains fixed and the digits shift left if multiplying and right if dividing.

Play games – This website is an activity to help practise multiplying and dividing by 10, 100 and 1000: http://mathsframe.co.uk/en/resources/resource/31/multiply_and_divide_by_10_100_and_1000_2

Kim Banks

KEY FLUENCY FACTS
Year 6, Spring 1

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To can round any whole or decimal number to a required degree of accuracy.

Round to nearest 10
6475-> 6480
2397 -> 2400
4996 -> 5000
631,987 -> 631,990
34,799 -> 34,800

Round to nearest 100
2352 -> 2400
4958 -> 5000
469,532 -> 469,500
29,996 -> 30,000

Round to nearest 1000
5499 -> 5000
289,574 -> 290,000
23,709,601 -> 23,710,000

Round to nearest 10,000
87,677 -> 90,000
596,438 -> 600,000
9,693,346 -> 9,690,000

Round to nearest 100,000
856,890-> 900,000
4,567,934 -> 4,600,000
982,632 -> 1,000,000

Round to nearest whole
7.8 -> 8
324.199 -> 324
899.98 -> 900

Round to one decimal place
74.94 -> 74.9
679.863 -> 679.9
23.953 -> 24

Round to two decimal places
45.9488 -> 45.95
5.7999 -> 5.8
5.94864 - > 5.95

Round to three decimal places
4.9087 -> 4.909
48.94966 -> 48.95

Key Vocabulary

What is 689 rounded to the nearest 10 ?

What is 23,689 rounded to the nearest 100 ?

What is 967,453 rounded to the nearest thousand ?

What is 23,609,346 rounded to the nearest ten thousand ?

What is 4,967,809 rounded to the nearest hundred thousand ?

What is 693.67 rounded to the nearest whole number ?

What is 17.98 rounded to one decimal place ?

What is 2.499 rounded to two decimal places ?

What is 27.98549 rounded to three decimal places ?

Children can practise giving a range of numbers that will round to a given answer e.g. when rounding to the nearest ten thousand what is the largest/smallest number that will round to 50,000 ? Use practical resources or pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst walking to school or during a car journey?

Look for patterns – Talk to your child about what happens when rounding with digits with 0 to 4 or 5 to 9 in the significant column. The following website gives some rules for rounding:

https://www.mathsisfun.com/rounding-numbers.html

Practise online – To practise rounding go to:

Kitty Banks http://mathszone.co.uk/count-and-understand/rounding/

https://uk.ixl.com/math/year-6/rounding

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To convert between decimals, fractions and percentages.

$\frac{1}{2} = 0.5 = 50\%$

$\frac{1}{4} = 0.25 = 25\%$

$\frac{3}{4} = 0.75 = 75\%$

$\frac{1}{5} = 0.2 = 20\%$

$\frac{2}{5} = 0.4 = 40\%$

$\frac{4}{5} = 0.8 = 80\%$

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

$\frac{9}{10} = 0.9 = 90\%$

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

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

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

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

$\frac{35}{100} = 0.35 = 35\%$

$\frac{3}{10} = 0.3 = 30\%$

$\frac{1}{3} = 0.33 = 33\%$

$\frac{2}{3} = 0.67 = 67\%$

$\frac{1}{8} = 0.125 = 12.5\%$

$\frac{3}{8} = 0.375 = 37.5\%$

Key Vocabulary

How many **tenths** is 0.8 ?

How many **hundredths** is 0.12 ?

Write 0.75 as a **percentage**.

Write ¼ as a **decimal**.

Write 33% as a **fraction**.

Children can practise finding fractions and percentages of numbers or quantities. For example: 2/3 of 27, 4/5 of 70kg, 10% of £25, 75% of 80kg, 15% of 40m (by finding 10% first) etc. Use pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst walking to school or during a car journey ?

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

Practise online – Go to:

www.mathplayground.com/Decention/Decention.html

http://mathsframe.co.uk/en/resources/resource/120/match_fractions_decimals_and_percentages#.UCdcd2MsCEY

http://www.math-play.com/Fractions-Decimals-Percents-Jeopardy/fractions-decimals-percents-jeopardy.html

KEY FLUENCY FACTS
Year 6, Summer 1

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know addition and subtraction facts for multiples of 10 to 1000 and decimal numbers with one decimal place. To know what must be added to a decimal with units, tenths and hundredths to make the next whole number. To be able to add doubles and near doubles of decimals and add or subtract a decimal with units and tenths that is nearly a whole number.

Some examples:

$70 + ? = 150$	$4.1 + ? = 5$	$1.6 + 1.6 = ?$
$230 - ? = 160$	$8.6 + ? = 9$	$3.7 + 3.7 = ?$
$650 + ? = 930$	$4.51 + ? = 5$	$2.5 + 2.6 = ?$
$720 - ? = 590$	$7.26 + ? = 8$	$4.5 + 4.6 = ?$
$1.4 + 4.7 = ?$	$3.71 + ? = 4$	$4.3 + 2.9 = ?$
$5.2 + ? = 8.1$	$2.345 + ? = 3$	$5.9 + 4.2 = ?$
$6.3 - 4.5 = ?$	$5.679 + ? = 6$	$6.5 - 3.9 = ?$
$? - 1.4 = 2.5$	$7.156 + ? = 8$	$4.2 - 3.8 = ?$

Key Vocabulary

What do I **add** to 430 to make 620 ?

What is 830 **take away** 490 ?

What is the **difference** between 4.5 and 2.8 ?

How many more than 9.8 is 12.1 ?

What do I **add** to 3.54 to make the next whole number ?

What is **double** 6.7 ?

This list includes some examples of facts that children should know. They should be able to questions with the missing number in different places e.g. $140 + ? = 630$ or $? - 6.6 = 8.5$ or $4.5 – 2.8 = ?$ Use pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst walking to school or during a car journey?

Buy one get three free - If your child knows one fact (e.g. $6.3 – 4.5 = 1.8$), can they tell you the other three facts in the same fact family?

Use number bonds to 10, 100 and 1000 - How can number bonds to 10, 100 and 1000 help you work out number bonds to the next whole number?

Use Place Value – For decimal calculations, it can be easier to convert to whole numbers first then convert back after calculating e.g. $6.3 – 4.5$ becomes $63 – 45 = 18$ so the answer to $6.3 – 4.5 = 1.8$

Use Rounding – For adding and subtracting decimals that are close to a whole number, round up first then adjust e.g. $2.3 + 4.9$ becomes $2.3 + 5 = 7.3$ then subtract 0.1 to give the answer 7.2

KEY FLUENCY FACTS
Year 6, Summer 2

At St Lawrence School, we value parents as partners in their child's learning. At the beginning of every half term, we will provide an overview of Key Fluency Facts so that parents are aware of the areas that will help their child secure their Mathematical knowledge and can work on these areas with their child:

To know the multiplication and division facts for all times tables up to 12 × 12, including square numbers, square roots and squares of the corresponding multiples of 10. To be able to use place value to multiply pairs of multiples of 10 and 100 and divide multiples of 100 by a multiple of 10 or 100. To be able to use knowledge of multiplication facts and place value to multiply and divide with decimals and multiples of 10 or 100. To be able to list factor pairs for given numbers and identify numbers with odd and even numbers of factors.

$12 \times 8 = 96$

$8 \times 9 = 72$

$132 \div 11 = 12$

$96 \div 8 = 12$

$8^2 = 64$

$5^2 = 25$

$40^2 = 1600$

$120^2 = 14{,}400$

$\sqrt{121} = 11$

$\sqrt{144} = 12$

$50 \times 30 = 1500$

$600 \times 20 = 12{,}000$

$300 \div 50 = 60$

$800 \div 40 = 20$

$2100 \div 300 = 7$

$0.8 \times 7 = 5.6$

$4.8 \div 6 = 0.8$

$0.3 \times 40 = 12$

Key Vocabulary

5 squared is 25

The square root of 81 is 9

Can you find a **factor** of 28 ?

The **product** of 0.6 and 4 is 2.4

Find two numbers whose **product** is 48.

I know that 8 is a factor of 56 because 8 multiplied by 7 equals 56.

Children can practise answering tables questions in any order, including missing number questions e.g. $12 \times ? = 132$ or $? \div 9 = 7$. They can practise listing all factor pairs for a given number e.g. for 24 the factor pairs are: 1 x 14, 2 x 12, 3 x 8, 4 x 6 and discuss when numbers will have an odd number of factors. Use practical resources or pictorial representations for support if necessary.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these number facts whilst 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.

On-line -

http://www.arcademics.com/games/meteor/meteor.html is a game to practise multiplication facts.

Practise your times tables here: https://www.timestables.com/

Play Games – Pick a number e.g. 36. Between you, how many multiplication and division facts can you think of that involve this number? e.g. 36 ÷ 9 =4, 40 x 9 = 360, 3 x 1.2 = 3.6 etc. Take it in turns to write a new fact. How many can you write in 3 minutes?

Kim Banks