



Fluency Facts: Parent Guide

Year 5: Autumn 1

I can round whole numbers to the nearest 10, 100 and 1000.
By the end of this half term, pupils should know the following facts. The aim is to be able to recall them **instantly**.

Examples:

Rounding to the nearest 10

To round a number to the nearest 10, look at the ones digit. If the ones digit is **5 or more**, round **up**. If the ones digit is **4 or less**, round **down**.

356

The 6 tells us that we need to round up to the next ten so the answer would be 360.

6451

The 1 tells us that we need to round down to the ten before. The answer would be 6450.

Rounding to the nearest 100

To round a number to the nearest 100, look at the tens digit. If the tens digit is **5 or more**, round **up**. If the tens digit is **4 or less**, round **down**.

298

The 9 tens tell us that we need to round up to the next hundred so the answer would be 300.

6742

The 4 tens tell us that we need to round down to the hundred before. The answer would be 6700.

Rounding to the nearest 1000

To round a number to the nearest 1000, look at the hundreds digit. If the hundreds digit is **5 or more**, round **up**. If the hundreds digit is **4 or less**, round **down**.

5076

The 0 hundreds tell us that we need to round down to the thousand before. The answer would be 5000.

8888

The 8 hundreds tell us that we need to round up to the next thousand. The answer would be 9000.

Top Tips

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

Misconceptions - When rounding down, pupils sometimes round down too far. E.g. When rounding 432 to the nearest 100, a student might round it to 300 rather than 400. Using a number line can help pupils to see which multiple of 100 the number is closest to.

Finding Multiples - Identifying the nearest multiple before and after the number is a useful strategy e.g. If rounding 3572 to the nearest 10, ask your child to state the multiple of 10 before (3570) and after (3580). Talk about which number 3572 is closest to to put rounding into context.

Real life application - Make reference to rounding when handling money, measuring and estimating to show the importance of this skill and for regular revision.



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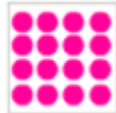
Year 5: Autumn 2

I can recall square numbers up to 12^2 and I can identify prime numbers up to 20.

By the end of this half term, pupils should know the following facts. The aim is to be able to recall them *instantly*.

Examples:

Square Numbers: This is the product when a number is multiplied by itself.



$$4^2 \text{ or } 4 \times 4 = 16$$

Prime Numbers: These are numbers, greater than 1, that have exactly two factors, themselves and 1.

19 is a prime number. It can only be divided by 1 and 19.

15 is not a prime number. It can be divided by 3 and 5 as well as 1 and 15.

Note: The number 1 is not a prime number as it has only 1 factor.

Key Questions

What is 8 squared?

Are there any even prime numbers?

What is the first prime number?

Is 15 a prime number?

How do you know?

Top Tips

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Maths Talk - It's really important that your child uses mathematical vocabulary accurately. Choose a number between 2 and 20. How many correct statements can your child make about this number using the vocabulary above?

Games - Roll a die and race against a partner to square the number.

Card Sort - Make a set of cards for the numbers from 1 to 20. How quickly can your child sort these into prime and non prime (composite) numbers? How many even prime numbers can they find? Are all odd numbers also prime numbers?



Fluency Facts: Parent Guide

Year 5: Spring 1

I know the multiplication and division facts up to 12×12 .
By the end of this half term, pupils should know the following facts. The aim is to be able to recall them *instantly*.

X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Pupils should be able to answer these questions in any order, including missing number questions.

E.g. $7 \times \square = 28$
or $\square \div 12 = 8$.

Key Questions

What is 6 multiplied by 7?

What is the product of 9 and 12?

What is 4 times 8?

What is 28 divided by 7?

What is 77 shared into groups of 11?

What is 84 shared into 12

Top Tips

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

Times Tables RockStars – Practising for ten minutes a day on TTRS can really help pupils' recall. Focus on the 'Studio' game to practise all of the times tables facts.

Speed Challenge – Take two packs of playing cards and remove the kings. Turn over two cards and ask your child to multiply the numbers together (Ace = 1, Jack = 11, Queen = 12). How many questions can they answer correctly in 2 minutes? Practise regularly and see if they can beat their high score.

Rock, Paper, Scissors – Play in pairs. Instead of showing rock, paper, scissors with your hands, show a number of fingers. Race against your partner to multiply the fingers together. E.g. Using the picture, you would do $5 \times 2 = 10$. Use both hands to practise up to 10×10 .





Fluency Facts: Parent Guide

Year 5: Spring 2

I can multiply and divide whole numbers by 10, 100 and 1000.

By the end of this half term, pupils should know the following facts. The aim is to be able to recall them **instantly**.

Examples:

When you **multiply** a number **by 10**, the digits move **one place to the left**.

$$4 \times 10 = 40$$

$$82 \times 10 = 820$$

$$530 \times 10 = 5,300$$

When you **multiply** a number **by 100**, the digits move **two places to the left**.

$$3 \times 100 = 300$$

$$58 \times 100 = 5,800$$

$$1,962 \times 100 = 196,200$$

When you **multiply** a number **by 1000**, the digits move **three places to the left**.

$$7 \times 1,000 = 7,000$$

$$45 \times 1,000 = 45,000$$

When you **divide** a number **by 10**, the digits move **one place to the right**.

$$50 \div 10 = 5$$

$$380 \div 10 = 38$$

$$9,310 \div 10 = 931$$

When you **divide** a number **by 100**, the digits move **two places to the right**.

$$900 \div 100 = 9$$

$$4,500 \div 100 = 45$$

$$16,200 \div 100 = 162$$

When you **divide** a number **by 1000**, the digits move **three places to the right**.

$$6,000 \div 1,000 = 6$$

$$13,000 \div 1,000 = 13$$

Top Tips

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

Misconceptions - We avoid saying 'you just add a zero' when multiplying by 10 or "take away a zero" as this is mathematically incorrect. Adding or subtracting zero to a number will not change its value. This misconception can also cause confusion when working with decimal numbers.

Eg. Using this 'trick' to do 6.4×10 would give an answer of 6.40 which is incorrect. Instead we teach children that the digits move along the place value chart. E.g. For 21×100 , the number gets 100 times larger.

TH	H	T	O
		2	1
2	1	0	0

Pairs game - You could make your own pairs game with calculations on one set of cards and the answers on another. Challenge your child with some similar calculations to check their understanding of place value (e.g. 42×100 ; $4200 \div 10$; $42000 \div 1000$).



Fluency Facts: Parent Guide

Year 5: Summer 1

I know one and two decimal place number bonds for numbers between 1 and 10.

By the end of this half term, pupils should know the following facts. The aim is to be able to recall them *instantly*.

Examples:

$0.6 + 0.4 = 1$

$3.7 + 6.3 = 10$

$0.4 + 0.6 = 1$

$6.3 + 3.7 = 10$

$1 - 0.4 = 0.6$

$10 - 6.3 = 3.7$

$1 - 0.6 = 0.4$

$10 - 3.7 = 6.3$

$0.75 + 0.25 = 1$

$4.82 + 5.18 = 10$

$0.25 + 0.75 = 1$

$5.18 + 4.82 = 10$

$1 - 0.25 = 0.75$

$10 - 5.18 = 4.82$

$1 - 0.75 = 0.25$

$10 - 4.82 = 5.18$

This list includes some examples of facts that children should know. They should be able to answer questions including missing number questions e.g. $0.49 + \square = 1$ or $7.2 + \square = 10$.

Key Questions

What do I add to 0.8 to make 1?

What is 1 take away 0.56?

What is 1.3 less than 10?

How many more than 7.85 is 10?

What is the difference between 0.92 and 10?

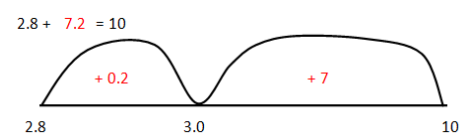
Top Tips

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Misconceptions - Children often add an extra 1 when finding number bonds to 10 using decimals e.g. when solving $2.8 + \square = 10$, they know that $2 + 8 = 10$ and then add 0.2 to give an answer of 8.2. Encourage your child to think about the smallest value column first e.g. adding 0.2 will take you to 3 so then you need to add 7. The missing number is 7.2

Visualise - Imagine jumping along a number line to find the answer.

Money - Use money examples to provide a real life context. E.g. Here is £1, if you buy a chocolate bar costing 67p, how much change will you need? Can you write this in pounds?





Fluency Facts: Parent Guide

Year 5: Summer 2

I can double and halve whole numbers and decimals.

By the end of this half term, pupils should know the following facts. The aim is to be able to recall them **instantly**.

Pupils should be able to double and halve all 2 digit numbers, including odd numbers to give a decimal answer.

Examples:

Double		Half
50	25	12.5
76	38	19
118	59	29.5
174	87	43.5

They should also be able to double and halve decimals to one decimal place.

Examples:

Double		Half
10.4	5.2	2.6
7.2	3.6	1.8
4.8	2.4	1.2

Key Questions

What is double 47?

What is half of 65?

If two tickets cost £79, how much would one ticket cost?

The swimming pool is 5.8km away, how far will we walk there and back?

Top Tips

The secret to success is practising *little and often*. Use time wisely. Can you practise these Fluency Facts while walking to school or during a car journey? Focus on doubling first and when your child is confident, move on to halving.

Partitioning - Encourage your child to partition the number e.g. When doubling 39, first double 30 and then double 9 and recombine. When halving 27, first halve 20 and then halve 7 and recombine.

Dice games - Use dice to generate a 2 digit number. Race against your child to double the number. Repeat with halving.

Ping Pong - Begin by saying 'ping' and your child should reply with 'pong'. Repeat and then convert to numbers i.e. say '3.9' and they reply '7.8' or say, '7.8' and they say '3.9'.