Fluency Facts: Parent Guide

Year 6: Autumn 1

I can derive multiplication facts using decimal numbers.

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

Your child should be able to apply times tables facts up to 12x12 to multiplying with decimal numbers.

Examples:

Using this	To then find this	And then this fact.
7 x 8 = 56	0.7 x 8 = 5.6	0.7 x 0.8 = 0.56
5 x 4 = 20	5 x 0.4 = 2	0.5 x 0.4 = 0.2
9 x 6 = 54	0.09 x 6 = 0.54	0.09 x 60 = 5.4
12 x 8 = 96	12 x 0.08 = 0.96	1.2 x 0.08 = 0.096

Key Questions

If you know 7 x 6, how can you use this to find 0.7 x 6?

What related facts can you find?

Keywords

Ten times bigger/ smaller

A hundred times bigger/ smaller

A thousand times bigger/ smaller

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 as this is mathematically incorrect. Adding zero to a number will not change its value. This misconception can cause confusion particularly when working with decimal numbers. Eg. Using this 'trick' to do 6.4 x 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. When comparing 9 to 0.09, we say that the number is 100 times smaller.

Fact Families - Ask your child to see how many related facts they can find from a given fact (e.g. 9 x 8 = 72).

Fluency Facts: Parent Guide

Year 6: Autumn 2

I can identify common factors of a pair of numbers.

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

A factor is a number that divides into another number exactly and without leaving a remainder.

Example: The factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24. The factors of 56 are 1, 2, 4, 7, 8, 14, 28 and 56.

The common factors of two numbers are the factors they share.

Example: The common factors of 24 and 56 are 1, 2, 4 and 8.

Children should be able to explain how they know that a number is a common factor.

Example: 8 is a common factor of 24 and 56 because 24 = 8 × 3 and 56 = 8 × 7.

Key Questions

What are the **factors** of 16?

What are the **common factors** of 16 and 30?

How do you know you have found **all the factors**?

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 - Regular practise of times tables is essential when finding factors of numbers. Encourage your child to continue to play on Times Tables RockStars to rehearse these facts.

Naming Factors - Choose two numbers between 1 and 144. Take it in turns to name factors. Who can find the most?

100 Square - Use a blank 100 square and coloured pencils. Player 1 circles a number less than 50. Player 2 then shades a factor of that number in one colour. Player 1 then shades another factor in their colour. Repeat until no more factors can be found. Choose another number to circle and repeat. The winner will have the most shaded numbers in their colour at the end of the game.

Fluency Facts: Parent Guide

Year 6: Spring 1

I can identify prime numbers up to 100 and recall the first ten cube numbers.

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

Examples:

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.

Cube Numbers: This is a number multiplied by itself 3 times.

The symbol for cubed is ³.

$2^3 = 2 \times 2 \times 2 = 8$

Key Questions

Are there any even **prime numbers**?

What is the first prime number?

Is 75 a prime number? How do you know?

What is 3 **cubed**?

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?

Maths Talk - It's really important that your child uses mathematical vocabulary accurately. Choose a number between 2 and 50. How many correct statements can your child make about this number using the vocabulary above?

Card Sort - Make a set of cards for the numbers from 1 to 100. 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?

Making cubes - Practically making cubes using interlocking cubes or looking at a Rubik's cube can help pupils to understand the concept of cube numbers.

Fluency Facts: Parent Guide

Year 6: Spring 2

I know common fraction, decimal and percentage equivalences.

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

Children should be able to convert between decimals, fractions and percentages for these and any number of tenths and hundredths.

Examples:

1/2 = 0.5 = 50%

1/4 = 0.25 = 25%

3/4 = 0.75 = 75%

1/3 = 0.333 = 33.3%

2/3 = 0.667 = 66.6%

1/10 = 0.1 = 10%

3/10 = 0.3 = 30%

1/5 = 0.2 = 20%

3/5 = 0.6 = 60%

1/20 = 0.05 = 5%

3/20 = 0.15 = 15%

1/100 = 0.01 = 1%

Definition: The simplest form is the smallest possible equivalent fraction of the number.

E.g. 4/10 in its simplest form would be 2/5.

Key Questions

How many **tenths** is 0.8?

How many **hundredths** is 0.12

Write 0.75 as a fraction in its **simplest form**.

What is 60% as **a decimal**?

Convert 4/5 to **a percentage**.

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? You may choose to work on equivalent fractions and decimals first and then introduce percentages.

Real life examples - When shopping, look for examples of fractions and percentages. Use these as a discussion point e.g. “There is 20% off this coat, what would that be as a fraction?”

Play games - Make some cards with pairs of equivalent fractions, percentages 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.