Key Instant Recall Facts

Year 5 – Autumn Term 1

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **with speed and accuracy:**

I can round numbers to 1 million to the nearest 10, 100 and 1,000

Children should be able to round any number to 1,000,000 to the nearest 10, 100 and 1,000.

See example below:

Round 348,290 to the nearest thousand = 348,000

Locate the thousands place then look ***next-door*** (at the hundreds column). If this digit in 1,2,3 or 4, the thousands stays the same. If the hundreds digit is 5 or above, the thousands digit is rounded up.

Key vocabulary

Can you round 23,822 to the nearest 10, 100 and 1,000?

1,349 rounded to the nearest 10 is 1,340. True or false? How do you know?

Top tips

The secret to success is practising ***little*** and ***often***. Use time wisely. Can you practise this KIRF whilst walking to school or during a car journey? You do not need to practise all aspects of the KIRF all at once; perhaps you could have a fact of the day, or a few facts per week to practise? If you would like more ideas, please speak to your child's teacher.

Practical resources and ideas

Focus on choosing different-sized numbers, then finding the nearest 10, 100 and 1,000 for that number. This allows children to practise locating the correct place value column to be able to round effectively.

Key Instant Recall Facts

Year 5 – Autumn Term 2

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **with speed and accuracy:**

I can identify multiples and factors up to 12 x 12

Children should be able to quickly recall multiples and factors of products up to 12 x 12; this KIRF allows pupils to practise their times table facts (multiples), as well as their ability to quickly recall factors of these products.

Find the factors of the product of 8 x 8

8 x 8 = 64

Factor pairs of 64 =

1 x 64, 2 x 32, 4 x 16, 8 x 8

Find the eighth multiple of 9 then find the product's factors

8 x 9 = 72

Factor pairs of 72 =

1 x 72, 2 x 36, 3 x 24, 4 x 18, 6 x 12, 8 x 9

Key vocabulary

Can you calculate the 7th multiple of 12?

Identify the factor pairs of the product of 8 x 5

Top tips

The secret to success is practising ***little*** and ***often***. Use time wisely. Can you practise this KIRF whilst walking to school or during a car journey? You do not need to practise all aspects of the KIRF all at once; perhaps you could have a fact of the day, or a few facts per week to practise? If you would like more ideas, please speak to your child's teacher.

Practical resources and ideas

Use a multiplication grid to choose a product then find that product's factors.

Chant times tables to 12 x 12 to practise, then quiz your child on randomly selected multiples, e.g. What is the sixth multiple of 11? What is the ninth multiple of 3?

Key Instant Recall Facts

Year 5 – Spring Term 1

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **with speed and accuracy:**

I can identify prime numbers up to 50

Children should know the following facts:

A prime number is a number with two factors: 1 and itself.

The following numbers are prime: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47

A composite number is a number divisible by more numbers than just 1 and itself.

The following numbers are composite: 4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20, 21, 22, 24, 25, 26, 27, 28, 30, 32, 33, 34, 35, 36, 38, 39, 40, 42, 44, 45, 46, 48, 49, 50

The number 1 only has one factor, so is neither composite or prime.

Key vocabulary

prime number
composite number
factor
multiple

Top tips

The secret to success is practising ***little*** and ***often***. Use time wisely. Can you practise this KIRF whilst walking to school or during a car journey? You do not need to practise all aspects of the KIRF all at once; perhaps you could have a fact of the day, or a few facts per week to practise? If you would like more ideas, please speak to your child's teacher.

Practical resources and ideas

It is very 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 key vocabulary above? Make a set of cards for the numbers from 2 to 50. How quickly can your child sort these into prime and composite numbers? How many even prime numbers can they find? How many odd composite numbers can they find?

Please note that 1 is not a prime or composite number.

Key Instant Recall Facts

Year 5 – Spring Term 2

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **with speed and accuracy:**

I can recall square numbers up to 12^2 and their square roots

Children should know the following square numbers and their square roots:

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

Key vocabulary

What is 7 squared?
What is 7 multiplied by itself?
What is the square root of 144?

Top tips

The secret to success is practising ***little*** and ***often***. Use time wisely. Can you practise this KIRF whilst walking to school or during a car journey? You do not need to practise all aspects of the KIRF all at once; perhaps you could have a fact of the day, or a few facts per week to practise? If you would like more ideas, please speak to your child's teacher.

Practical resources and ideas

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?

Key Instant Recall Facts

Year 5 – Summer Term 1

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **with speed and accuracy:**

I know the first five cube numbers

Children should know that a cube number is any number multiplied by itself three times.

n x n x n

It can be written as n^3

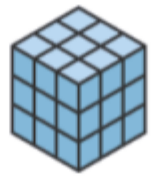
The first five cube numbers are:

1 x 1 x 1 = 1
2 x 2 x 2 = 8
3 x 3 x 3 = 27
4 x 4 x 4 = 64
5 x 5 x 5 = 125

1^3

2^3

3^3



Key vocabulary

cube number
cube root
power of three
multiply
divide
product

Top tips

The secret to success is practising ***little*** and ***often***. Use time wisely. Can you practise this KIRF whilst walking to school or during a car journey? You do not need to practise all aspects of the KIRF all at once; perhaps you could have a fact of the day, or a few facts per week to practise? If you would like more ideas, please speak to your child's teacher.

Practical resources and ideas

Use visual images to help children understand what a cube number is.

Key Instant Recall Facts

Year 5 – Summer Term 2

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **with speed and accuracy:**

I can convert between improper fractions and mixed fractions

Children should know what improper and mixed fractions are and understand they are fractions larger than a whole. They should be able to convert between the two.

Improper fraction to mixed fraction:
An improper fraction is 'top-heavy'; the numerator is larger than the denominator.

16/3 = 5 1/3

Divide the numerator (16) by the denominator (3) = 5 wholes remainder 1/3

Mixed fraction to improper fraction:
A mixed fraction is a fraction with a whole number and a fractional part.

5 1/3 = 16/3

Multiply the whole (5) by the denominator (3) then add the numerator (1) = 15/3 + 1/3

Key vocabulary

improper fraction
mixed fraction
numerator
denominator
whole
convert

Top tips

The secret to success is practising ***little*** and ***often***. Use time wisely. Can you practise this KIRF whilst walking to school or during a car journey? You do not need to practise all aspects of the KIRF all at once; perhaps you could have a fact of the day, or a few facts per week to practise? If you would like more ideas, please speak to your child's teacher.

Practical resources and ideas

Practise converting between mixed and improper fractions by drawing pizzas.

E.g. 4 ½ pizzas. Draw four whole pizzas split into halves, and a fifth pizza. Colour in the four wholes and the half of the fifth pizza. Count how many halves altogether. 4 x ½ = 8/2 + ½ = 9/2 4 ½ = 9/2

You can also do this with an improper fraction to a mixed number, by drawing pizzas and counting the nine halves. How many whole pizzas and how many halves left over?