Key Instant Recall Facts (KIRF) Overview

KIRFs (Key Instant Recall Facts) are designed to support the development of the mental fluency skills that underpin much of the mathematics curriculum. They are particularly useful when calculating, be it adding, subtracting, multiplying or dividing.

	EYFS	Year 1	Year 2
Autumn 1	I can say the numbers from 0 to 5 and back from 5 to 0 in order.	I know number bonds to 10.	I know number bonds to 10 and number bonds for each number to 10.
		I know number bonds to 10 and number bonds for each number to 10.	I know number bonds to 20.
Autumn 2	I can say the numbers from 0 to 10 and back from 10 to 0 in order.	I know doubles and halves of numbers to 10.	I know doubles and halves of numbers to 20.
		I can read and write numbers 1-10 in numerals and words.	I know the multiplication and division facts for the 2 times table.
Spring 1	I know my number facts for numbers up to 5.	I can read and write numbers 1-20 in numerals and words.	I know multiplication and division facts for the 5 times table.
		I know number bonds to 20.	I know multiplication and division facts for the 10 times table.
Spring 2	I can say which number is one more or one less than a given number to 10	I am able to count in groups of 2.	I can count, read and write numbers to 100 in numerals and words.
		I am able to count in groups of 5.	I know number bonds for each number to 15.
Summer 1	I can say the numbers from 0 to 20 and back from 20 to 0 in order	I know number bonds to 10 and number bonds for each number to 10.	I know number bonds for each number to 20
Summer 2	I can say which number is one more or one less than a given number to 20	I know the properties of common 2D shapes.	I know the properties of common 3D shapes.
		I know all of the days of the week and months in a year.	I am able to tell the time to o'clock, half past, quarter past and quarter to.

	Year 3	Year 4
Autumn 1	I know number bonds for each number to 20.	I know all of my number bonds to 100.
	I am able to instantly find 10 and 100 more or less than any number.	I am able to recognise 1, 10, 100 and 1000 more or less than any number.
Autumn 2	I know the multiplication and division facts for the 3 times table.	I know the multiplication and division facts for the 6 times table.
	I know multiplication and division facts for the 4 times table.	I know the multiplication and division facts for the 7 times table.
Spring 1	I know multiplication and division facts for the 8 times table.	I know the multiplication and division facts for the 9 times table.
	I know multiplication and division facts for 2, 3, 4, 5, 8 and 10 times tables.	I know the multiplication and division facts for the 12 times table.
Spring 2	I know the multiplication and division facts for the 11 times table.	I know all multiplication and division facts up to 12 x 12.
	I am able to measure objects and compare lengths involving mm, cm and m.	
Summer 1	I am able to compare measurement for mass (g/kg) and volume/capacity (ml/l).	I am able to multiply a single digit number by 10 and 100.
	I am able to recall duration of time facts.	I am able to recognise and write simple equivalent fractions.
Summer 2	I am able to tell the time to o'clock, half past, quarter past and quarter to	I am able to convert between different units of measurement (for example - hours to minutes, kilometres to metres).
	I am able to tell the time to the nearest 5 minutes and one minute.	I am able to compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.

KIRFS - Autumn term Year 5 and 6		
	Year 5	**Year 6**
Week 1	Times tables and division facts to 12 x 12 consolidation	Times tables and division facts to 12 x 12 consolidation, and then x 10, x 100, x 1000 and x 0.1
Week2	To calculate decimal doubles to 1 decimal place	To calculate decimal doubles to 2 decimal places
Week 3	To calculate all decimal bonds to 1	To calculate all decimal bonds to 1 and 10
Week 4	To recall squares of numbers to 12	To recall squares of numbers to 20
Week 5	Learn the names and properties of quadrilaterals	Learn the names and properties of quadrilaterals
Week 6	To learn the properties of polygons	To learn the properties of polygons
Week 7	To learn the properties of common 3D shapes e.g. sphere, cube, cuboid, triangular prism, cone and pyramid	To learn the properties of common 3D shapes e.g. sphere, cube, cuboid, triangular prism, cone and pyramid
Autumn 2		
Week 1	To know how many days there are in a week, a fortnight, a year, a leap year and in each month, and how many weeks in a year. Convert between the 12hr and 24hr clock.	To know how many days there are in a week, a fortnight, a year, a leap year and in each month, and how many weeks in a year. Convert between the 12hr and 24hr clock. Calculate the answers to time problems including different units of time.

Week 2	To recognise equivalent decimal fractions to $\frac{1}{2}$ $\frac{1}{4}$ $\frac{3}{4}$ $\frac{1}{10}, \frac{1}{5}, \frac{1}{20}, \frac{1}{3}$	To recognise equivalent decimal fractions to $\frac{1}{2}$ $\frac{1}{4}$ $\frac{3}{4}$ $\frac{1}{10}, \frac{1}{5}, \frac{1}{20}, \frac{1}{3}, \frac{2}{3}, \frac{1}{8}, \frac{3}{8}$
Week 3	To learn and convert between equivalent measurements – length, mass, capacity	To learn and convert between equivalent measurements – length, mass, capacity
Week 4	To be able to list factor pairs	To be able to list factor pairs
Week 5	To recall all prime numbers to 30	To recall all prime numbers to 100
Week 6	To use negative numbers in context and calculate intervals across zero.	To use negative numbers in context and calculate intervals across zero.

KIRFS - Spring term		
	Year 5	Year 6
Week 1	Know the tests for divisibility for 3 and 6 (plus 5 and 10)	Know the tests for divisibility for 3 and 6 (plus 5 and 10) Devise own criteria for sorting numbers
Week 2	Know the tests for divisibility for 2, 4 and 8	Know the tests for divisibility for 2, 4 and 8. Prove or disprove a rule involving divisibility / factors
Week 3	To know how many days there are in a week, a fortnight, a year, a leap year and in each month, and how many weeks in a year.	To know how many days there are in a week, a fortnight, a year, a leap year and in each month, and how many weeks in a year.
Week 4	To recall all prime numbers to 30	To recall all prime numbers to 100

Week 5	To know and be able to convert units of length (metric)	To know and be able to convert units of length (metric and imperial)
Week 6	To know and be able to convert units of mass	To know and be able to convert units of mass and use a conversion chart
Week 7	To calculate area and perimeter of squares	To calculate area and perimeter of squares, including those whose side lengths are not whole numbers
Week 8	To calculate area and perimeter of triangles and parallelograms	To calculate area and perimeter of triangles and parallelograms
Week 9	To calculate volume of cubes and cuboids	To calculate area of cubes, cuboids and trapeziums
Week 10	To calculate missing angles in a triangle, on a straight line and around a point	To calculate missing angles in a triangle, on a straight line, around a point and those made when a line crosses two parallel lines (Z, F and C angles)
Week 11	To calculate a percentage of a number e.g. 10%, 25%, 1% and 50%	To calculate a percentage of a number and increase / decrease a number by a given %
Week 12	To halve proper fractions	To divide proper fractions by whole numbers

	Year 5	Year 6
KIRFS - Summer term		
Week 1	Multiplying decimals by whole numbers	Multiplying decimals by decimals
Week 2	To tell the time to the nearest minute using analogue and digital, in 12 or 24 hour clock	To tell the time to the nearest minute using analogue and digital, in 12 or 24 hour clock. To compare to differing time zones
Week 3	To calculate time intervals (00, 15, 30 and 45)	To calculate time intervals to one minute
Week 4	To calculate difference between a positive and negative number in a real life context	To calculate difference between a positive and negative number in a real life context
Week 5	To count on and back a given amount between the numbers -20 and +20	To add and subtract negative numbers e.g. -4 + 17, 4 – -17, 4 - 17
Week 6	To read scales with a variety of increments	To multiply and divide negative / numbers e.g. -56 ÷ 7, -56 ÷ -7, 56 ÷ -7 etc.
Week 7 – end of term	General revision and mental maths tests	General revision and mental maths tests