Key Instant Recall Facts

Y6 - Autumn 1st

This half term your children are working towards achieving their individual KIRF targets, indicated below.
The ultimate aim is for your child to be able to recall these facts instantly!

Know all previous number bonds (including decimals)

Examples of number bonds:

54 + 46 = 100
39 + 61 = 100
100 - 77 = 23
4.5 + 5.5 = 10
8.1 + 1.9 = 10
10 - 6.4 = 3.6
10 - 5.2 = 4.8
0.62 + 0.38 = 1
0.76 + 0.24 = 1
1 - 0.35 = 0.65

Example of decimal bonds for 10:

6.2 + 3.8 = 10; 3.8 + 6.2 = 10
so
10 - 6.2 = 3.8; 10 - 3.8 = 6.2

4.9 + 5.1 = 10; 5.1 + 4.9 = 10
so
10 - 4.9 = 5.1; 10 - 5.1 = 4.9

Call out!

Play number ping pong! Start off saying 'ping', child replies with 'pong'. Repeat and then convert to numbers i.e. say '0.3' and they reply '0.7' (decimal bonds for 1)

Helpful hints for parents

- *Create regular, short opportunities for rapid-fire questions where an instant correct answer is required.*
- *Use objects to consider the bonds in a practical way.*
- *Look at the patterns with both objects and numbers e.g. as one number increases the other one decreases.*
- *Practise with the numbers in order AND chosen randomly - remember the aim is for the child to be able to respond immediately.*

Key vocabulary

how many more to make altogether make sum total how much more is…than… difference between

Key Instant Recall Facts

Y6 - Autumn 2nd

This half term your children are working towards achieving their individual KIRF targets, indicated below.
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Derive multiplication and division facts using decimal numbers

Helpful hints for parents

- ***Create regular opportunities for rapid-fire questions where an instant correct answer is required.***
- ***Encourage children to use what they already know, for example the 6x 3 = 18, so 0.6 x 3 = 1.8.***
- ***Chanting tables really does help. Make it fun by adding actions too or singing!***
- ***Don't forget to chant those division facts too; they are often much harder to recall.***

Key vocabulary *times multiplied by lots of groups of multiple of divided by shared product divisible by factor square number*

8 x 7 = 56; 8 x 0.7 = 5.6; 0.8 x 7 = 5.6;
80 x 7 = 560; 8 x 70 = 560; 80 x 70 = 5600

56 ÷ 8 = 7; 56 ÷ 7 = 8; 5.6 ÷ 8 = 0.7; 5.6 ÷ 7 = 0.8
560 ÷ 8 = 70; 560 ÷ 80 = 7; 5600 ÷ 70 = 80

A carpenter needs to cut a plank of wood that is 4.8 m long into 8 pieces. How long will each piece of wood be?

A piece of ribbon measure 5.6m in total. 8 cm are needed to make a bow. How many bows can we make?

A single paper clip is 9 cm long. What is the greatest number of paper clips that can be made from 6.3 metres of wire?

Jeff has saved up £7.20 over the last 8 weeks. If he saves the same amount each week, how much does he save each week?

Play Fizz Buzz. To practice the 0.5 and 0.8 times tables together take it in turns to count in steps of 0.1. If a number is in the 0.5 x table say 'Fizz' instead of the number. Say 'Buzz' if it's in the 0.8's and 'Fizz Buzz' if it's in both.

Pick a domino, add the number of dots together then multiply by a decimal number to 0.9. To extend, pick two dominoes: if each spot represents 0.1, what is the answer when I multiply them together?

Remove picture cards from a pack of cards. Pick a card and treat the number as tenths. State the multiplication and division fact that the child is working on.
e.g. Pick the '8' card
so 7 x 0.8 = 5.6 and 5.6 divided by 7 is 0.8

Key Instant Recall Facts

Y6 - Spring 1st

This half term your children are working towards achieving their individual KIRF targets, indicated below.
The ultimate aim is for your child to be able to recall these facts instantly!

Know the doubles and halves of all two-digit decimals

Helpful hints for parents

- *Create regular opportunities for rapid fire questions where an instant correct answer is required*
- *Encourage children to use what they already know, for example the 6x table is double the 3x table!*
- *When children are confident with doubles ask them to find the corresponding halves*
- *Practise halving at least as often as doubling. This will help children with subtraction at a later date*

Key vocabulary *multiply, product, times by, lots of, share, group, divide, double, near double, twice, 2 lots of, 2 times, half, halved, divided by 2, shared between 2, group in pairs*

Double

3.4 → 6.8

3.5 → 7.0

3.6 → 7.2

Halves

8.4 → 4.2

8.5 → 4.25

8.6 → 4.3

8.7 → 4.35

What is 1/2 of 0.38?

1/2 of 0.3 =0.15

1/2 of 0.08 = 0.04

So 1/2 of 0.38 must be 0.19!

Play number ping pong!
Start of saying 'ping', child replies with 'pong'.
Repeat and then convert to numbers i.e. say 3.9' and they reply '7.8' (double 2 digit decimal) Or say, '7.8' and they say '3.9'

Two tickets cost £67, how much would one ticket cost?

£33.50
How do you know?
I know because half of 60 is 30 and half of 7 is 3.5

The swimming pool is 3.7km away. How far will we travel there and back?

7.4km
Can you explain?
Well, double 3 is 6 and double 0.7 is 1.4 which makes 7.4 altogether

Timed Games:
How well are you doing? How many questions can you answer in 2 minutes. Can you beat your own record?

Key Instant Recall Facts

Y6 - Spring 2nd

This half term your children are working towards achieving their individual KIRF targets, indicated below. The ultimate aim is for your child to be able to recall these facts instantly!

Know all the square numbers to 12 x 12

Helpful hints for parents

- ***Create regular opportunities for rapid fire questions where an instant correct answer is required***
- ***Encourage children to use what they already know, for example the 6x table is double the 3x table!***

Remember: **A square number is a number multiplied by itself.**

1) Write out the numbers from 1 to 100 in ten rows of 10.
2)Colour in 1 x 1, 2 x 2, 3 x 3, etc. up to 10 x 10
3) Is there a pattern? Can you explain it?
4) Examine the differences between each square number.
5) Can you predict the next two square numbers and beyond?
6) If you have completed the exercise correctly, you should have shaded 1, 4, 9, 16, 25, 36, 49, 64, 81 and 100, and established that the next two numbers are 121 and 144.

7) **Now learn them and the corresponding square roots (e.g. the square root of 81 is 9)**
8) Can you write some word problems of your own involving square numbers and square roots.
e.g. 8 people paid £8 each for theatre tickets. How much did they pay altogether?
e.g. If 12 people paid £144 for tickets altogether, how much was each ticket?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!

Key Instant Recall Facts Y6 - Summer 1st

This half term your children are working towards achieving their individual KIRF targets, indicated below. The ultimate aim is for your child to be able to recall these facts instantly!

Know the tests for divisibility for numbers up to 10

Helpful hints for parents

- ***Select a random number (2-digit to start with) and ask whether the number is divisible by 2, 3, 5, 6,9. How do you know?***
- ***Encourage children to know these really well as a means of developing more efficient number strategies.***

Key vocabulary ***Divisible by, factor, shared, divided by, groups of***
Divisibility, prime number, square number
Multiple, factor, digits

THE DIVISIBILITY RULES

Dividing by 2
All even numbers are divisible by 2.
e.g., all numbers ending in 0,2,4,6 or 8.

Dividing by 3
Add up all the digits in the number.
Find out what the sum is. If the sum is divisible by 3, so is the number
For example: 12123 (1+2+1+2+3=9) 9 is divisible by 3, therefore 12123 is too!

Dividing by 4
Are the last two digits in your number divisible by 4?
If so, the number is too!
For example: 358912 ends in 12 which is divisible by 4, thus so is 358912.

Dividing by 5
Numbers ending in a 5 or a 0 are always divisible by 5.

Dividing by 6
If the number is divisible by 2 and 3 it is divisible by 6 also.

Dividing by 7
Take the last digit in a number.
Double and subtract the last digit in your number from the rest of the digits.
Repeat the process for larger numbers.
Example: 357 (Double the 7 to get 14.
Subtract 14 from 35 to get 21 which is divisible by 7 and we can now say that 357 is divisible by 7.

Dividing by 8
This one's not as easy, but if the last 3 digits are divisible by 8, so is the entire number.
Example: 6008 - The last 3 digits are divisible by 8, therefore, so is 6008.

Dividing by 9
Almost the same rule and dividing by 3. Add up all the digits in the number.
Find out what the sum is. If the sum is divisible by 9, so is the number.
For example: 43785 (4+3+7+8+5=27) 27 is divisible by 9, therefore 43785 is too!

Dividing by 10
If the number ends in a 0, it is divisible by 10.

Key Instant Recall Facts Y6 - Summer 2nd

This half term your child is working towards achieving their individual KIRF target, indicated below. The ultimate aim is for your child to be able to recall these facts instantly!

Know the square roots of square numbers to 15 x 15

Helpful hints for parents

- **There is a clear link to the Spring 2 KIRF, but re-visiting will provide consolidation and better prepare your child for mental arithmetic at high school**

- ***Create regular opportunities for rapid fire questions where an instant correct answer is required***
- ***Encourage children to use what they already know, for example the 6x table is double the 3x table***
- ***Children might be extended further by learning the triangular numbers to 91.***

Square Numbers	Square Roots
1	1
4	2
9	3
16	4
25	5
36	6
49	7
64	8
81	9
100	10
121	11
144	12
169	13
196	14
225	15

What are the next numbers in these sequences:

25 36 49 64 __ __ __ ?

64 81 100 121 __ ___ ___ ?

If you square any number ending in '5'

- **Multiply the first digit by 1 more than itself, then add the digits 25 onto the end:**

e.g. 35 x 35 → 3 x 4 =12 so, 1225

65 x 65 → 6 x 7 = 42 so, 4225

This extension will increase confidence and develop understanding.