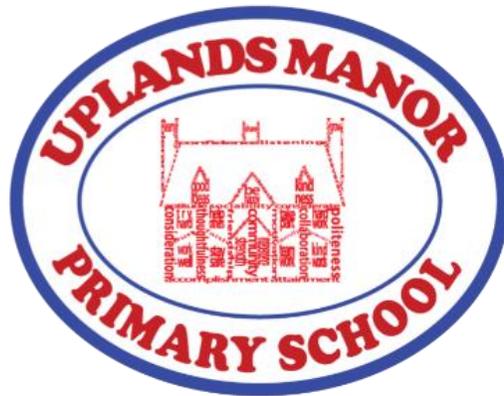
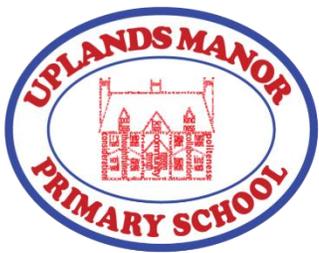


Uplands Manor Primary School

Key Instant Recall Facts (KIRFs)

Year 5





Uplands Manor Primary School

Key Instant Recall Facts

Year 5 - Autumn 1

Targets:

I know the multiplication and division facts up to the 12 times table.

1	2	3	4	5	6
1 x 1 = 1	2 x 2 = 4	3 x 3 = 9	4 x 4 = 16	5 x 5 = 25	6 x 6 = 36
1 x 2 = 2	2 x 3 = 6	3 x 4 = 12	4 x 5 = 20	5 x 6 = 30	6 x 7 = 42
1 x 3 = 3	2 x 4 = 8	3 x 5 = 15	4 x 6 = 24	5 x 7 = 35	6 x 8 = 48
1 x 4 = 4	2 x 5 = 10	3 x 6 = 18	4 x 7 = 28	5 x 8 = 40	6 x 9 = 54
1 x 5 = 5	2 x 6 = 12	3 x 7 = 21	4 x 8 = 32	5 x 9 = 45	6 x 10 = 60
1 x 6 = 6	2 x 7 = 14	3 x 8 = 24	4 x 9 = 36	5 x 10 = 50	6 x 11 = 66
1 x 7 = 7	2 x 8 = 16	3 x 9 = 27	4 x 10 = 40	5 x 11 = 55	6 x 12 = 72
1 x 8 = 8	2 x 9 = 18	3 x 10 = 30	4 x 11 = 44	5 x 12 = 60	
1 x 9 = 9	2 x 10 = 20	3 x 11 = 33	4 x 12 = 48		
1 x 10 = 10	2 x 11 = 22	3 x 12 = 36			
1 x 11 = 11	2 x 12 = 24				
1 x 12 = 12					

7	8	9	10	11	12
7 x 7 = 49	8 x 8 = 64	9 x 9 = 81	10 x 10 = 100	11 x 11 = 121	12 x 12 = 144
7 x 8 = 56	8 x 9 = 72	9 x 10 = 90	10 x 11 = 110	11 x 12 = 132	
7 x 9 = 63	8 x 10 = 80	9 x 11 = 99	10 x 12 = 120		
7 x 10 = 70	8 x 11 = 88	9 x 12 = 108			
7 x 11 = 77	8 x 12 = 96				
7 x 12 = 84					

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

Top Tips

Log in to Times Table Rock stars and practice the different games on their to work on recall and speed.

As multiplication can work in any order, children only need to remember the facts on the left hand side and know that the factors can be swapped and still have the same answer.

E.g. $7 \times 3 = 21$ so $3 \times 7 = 21$.

<https://www.topmarks.co.uk/maths-games/daily10> - Level 5

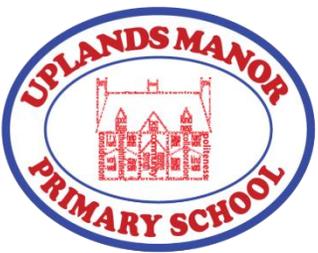
Multiplication/Level 5 Division

Key Vocabulary

What is 12 multiplied by 6?

What is 7 times 8?

What is 84 divided by 7?



Uplands Manor Primary School
Key Instant Recall Facts
Year 5 - Autumn 2

Targets:

I can find factor pairs of a number.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

They should already know their multiplication and division facts to 12×12 . If not, continue to work on fluency with those. Factor pairs is an extension of this knowledge. When given a number, children should be able to state 2 numbers that can be multiplied to give that answer.

E.g. $24 = 6 \times 4$ $35 = 5 \times 7$

Some numbers have more than one answer e.g. $24 = 8 \times 3$ and 12×2

Children should also be able to explain what factor 2 numbers have in common. E.g. A common factor of 24 and 56 is 8 because:

$$8 \times 3 = 24 \text{ and } 8 \times 7 = 56$$

Key Vocabulary

Can you find a factor of 28?

Find two numbers whose product is 20.

I know that 6 is a factor of 72 because 6 multiplied by 12 equals 72.

Top Tips

Play games - There is an activity at <http://www.conkermaths.org/cmweb.nsf/products/conkerkirfs.html> to practise finding factor pairs.

Think of the question – One player thinks of a times table question (e.g. 4×12) and states the answer. The other player has to guess the original question.

<https://www.topmarks.co.uk/maths-games/7-11-years/multiplication-and-division> - lots of games here. Choose two numbers between 1 and 144. Take it in turns to name factor pairs. Who can find the most?



Uplands Manor Primary School
Key Instant Recall Facts
Year 5 – Spring 1

Targets:

I can identify prime numbers up to 20.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

Top Tips

The secret to success is practising little and often.
Use time wisely.

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?
Make a set of cards for the numbers from 2 to 20. 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?

A prime number is a number with exactly 2 factors. It can only be divided by itself and 1.

**The following numbers are prime numbers:
2, 3, 5, 7, 11, 13, 17, 19**

1 is not a prime number because it only has one factor: 1.

A composite number is divisible by a number other than 1 or itself.

The following numbers are composite numbers: 4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20

Your child could use drawings to prove why these numbers are not prime. Can they create arrays to show their factors?

Maybe they can also explain why 2 is the only even prime number.

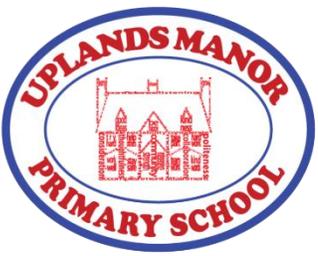
Key Vocabulary

Prime number

Composite number

Factor

Multiple



Uplands Manor Primary School
Key Instant Recall Facts
Year 5 – Spring 2

Targets:

I can recall square numbers up to 144 and their square roots.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

Square numbers can be shown clearly as a pattern in an array of dots. Drawing these can help children to learn them all.

E.g. $3 \times 3 = 9$ 

A square number is a number multiplied by itself:

$$1 \times 1 = 1$$

$$2 \times 2 = 4$$

$$3 \times 3 = 9$$

$$4 \times 4 = 16$$

$$5 \times 5 = 25$$

$$6 \times 6 = 36$$

$$7 \times 7 = 49$$

$$8 \times 8 = 64$$

$$9 \times 9 = 81$$

$$10 \times 10 = 100$$

$$11 \times 11 = 121$$

$$12 \times 12 = 144$$

These facts are related to the square roots:

$$\sqrt{1} = 1$$

$$\sqrt{4} = 2$$

$$\sqrt{9} = 3$$

$$\sqrt{16} = 4$$

$$\sqrt{25} = 5$$

$$\sqrt{36} = 6$$

$$\sqrt{49} = 7$$

$$\sqrt{64} = 8$$

$$\sqrt{81} = 9$$

$$\sqrt{100} = 10$$

$$\sqrt{121} = 11$$

$$\sqrt{144} = 12$$

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these

KIRFs while walking to school or during a car journey? You don't need to practise them all at once:

Perhaps you could have a fact of the day.

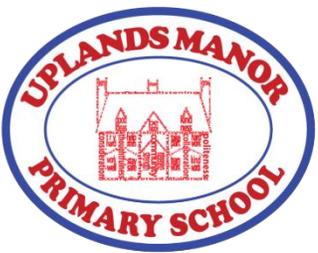
Games: <https://www.topmarks.co.uk/maths-games/hit-the-button>

Key Vocabulary

Squared number

Square root

To square a number,
I times it by itself.



Uplands Manor Primary School
Key Instant Recall Facts
Year 5 – Summer 1

Targets:

I can convert between fractions, decimals and percentages.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

Children can use division methods to identify the decimal equivalent of a fraction. This can be a great stepping stone to learning percentages as well.

$\frac{1}{2} = 0.5 = 50\%$	$\frac{1}{100} = 0.01 = 1\%$
$\frac{1}{4} = 0.25 = 25\%$	$\frac{7}{100} = 0.07 = 7\%$
$\frac{3}{4} = 0.75 = 75\%$	$\frac{21}{100} = 0.21 = 21\%$
$\frac{1}{10} = 0.1 = 10\%$	$\frac{75}{100} = 0.75 = 75\%$
$\frac{9}{10} = 0.9 = 90\%$	$\frac{99}{100} = 0.99 = 99\%$

Key Vocabulary

How many tenths is 0.8?

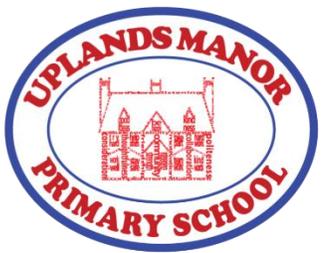
How many hundredths is 0.12?

Write 0.75 as a fraction. Write $\frac{1}{4}$ as a decimal.

Top Tips

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

<https://www.topmarks.co.uk/maths-games/daily10> - Level 6 Fractions – decimal equivalent



Uplands Manor Primary School
Key Instant Recall Facts
Year 5 – Summer 2

Targets:

I know decimal number bonds to
1 and 10.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

Children should be able to answer questions like these as well as missing number problems e.g. $0.2 + \bigcirc = 1$ or $3.6 + \bigcirc = 10$

Decimal number bonds to 1	Decimal number bonds to 10
e.g.	e.g.
$0.1 + 0.9 = 1$	$1.1 + 8.9 = 10$ $2.1 + 7.9 = 10$
$0.2 + 0.8 = 1$	$1.2 + 8.8 = 10$ $2.2 + 7.8 = 10$
$0.3 + 0.7 = 1$	$1.3 + 8.7 = 10$ $2.3 + 7.7 = 10$
$0.4 + 0.6 = 1$	$1.4 + 8.6 = 10$ $2.4 + 7.6 = 10$
$0.5 + 0.5 = 1$	$1.5 + 8.5 = 10$ $2.5 + 7.5 = 10$
$0.7 + 0.3 = 1$	$1.6 + 8.4 = 10$ $2.6 + 7.4 = 10$
$0.8 + 0.2 = 1$	$1.7 + 8.3 = 10$ $2.7 + 7.3 = 10$
$0.9 + 0.1 = 1$	$1.8 + 8.2 = 10$ $2.8 + 7.2 = 10$
	$1.9 + 8.1 = 10$ $2.9 + 7.1 = 10$ etc.
What other facts do they know can help with these number bonds?	What strategies can they use to help with this?

Key Vocabulary

___ needs ___ to make
1.

___ needs ___ to
make 10.

If I know that $2 + 8 = 10$, then I know that 0.2 and 0.8 make 1.

If I know that $83 + 17 = 100$ then I know that $8.3 + 1.7 = 10$.

Top Tips

Hit the button - <https://www.topmarks.co.uk/maths-games/hit-the-button> Using this game will help your child practise decimal number bonds to 1 and also 10 in a fun and engaging way. Can they beat their previous score? Can they beat your score?