

Welcome to our Maths Information Workshop for Parents

How maths is taught today... What are all those strange bits of equipment?
How you can help...

Have a go at
some of our
activities whilst
you are waiting!



Upper Key
Stage 2

Years 5 and 6

March 2019



Maths

How did you get on with your starting activities?

How did you feel when we asked you to do this?

This is how the children feel!

Activity 1

Here are 4 numbers:

8 16 15 23

Which is the odd one out and why?

Activity 2

A puzzle!

$$\begin{array}{r} \square \square 3 \\ + \square 7 \square \\ \hline \square \square 1 \\ \hline \end{array}$$

Can you think of a job or everyday task where maths is not used in some way?

ON HOLIDAY!

Did you know you use maths on holiday

Even when your looking to shop about maths. Deciding the first of a whole b

Get flight price and time?

£ → \$ currency

involves numbers → MAT

used everywhere!

Architecture includes...

Geometry in architecture we use various shapes that make designs and we use them in buildings.

Angles

Angles are an important part of architecture they help to be better and the angles that they use in buildings are they help to make the buildings look like the things of nature.

maths in gaming

If you want to win, maths is your way forward.

MATHS IN SHOPPING

How much did I spend?

How much change do I have?

How much change do I have?

£5 £10 £20 £50

£20 £20

Many is used for a lot of things. The thing it's used for is buy things or pay for things. For example: paying for food, electricity and furniture.

CONVERTING UNITS

Flour

RATIO
You are making 12 cakes for 3 cakes you use 120g of flour so for 12 cakes you would use 480g of flour.

There are 120g of sprinkles and 10 cakes you put 1g on each cake.

Putting it on the right side so it does not burn.

1 teaspoon = 3 tea-spoons
2 teaspoon = 6 (30ml)

If there is 2 eggs in a recipe for 6 people how many eggs for 12 people?

CONVERSION when the recipe is kg but your weighing scale measures in g so you have to convert it.

249, 450, 12, 7, 9, 1, 1, 4, 0, 5, 6, 1, 0, 9, 1, 0, 4, 1, 0, 1, 0, 4, 9

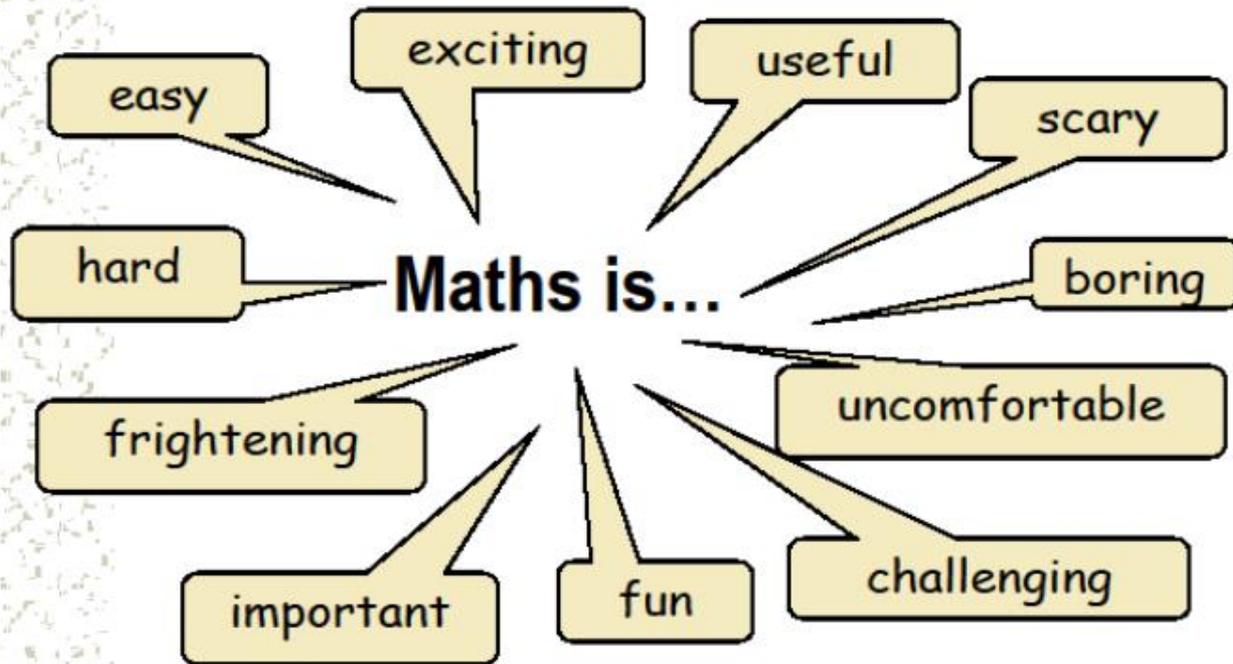




How do you feel about maths?

Maths

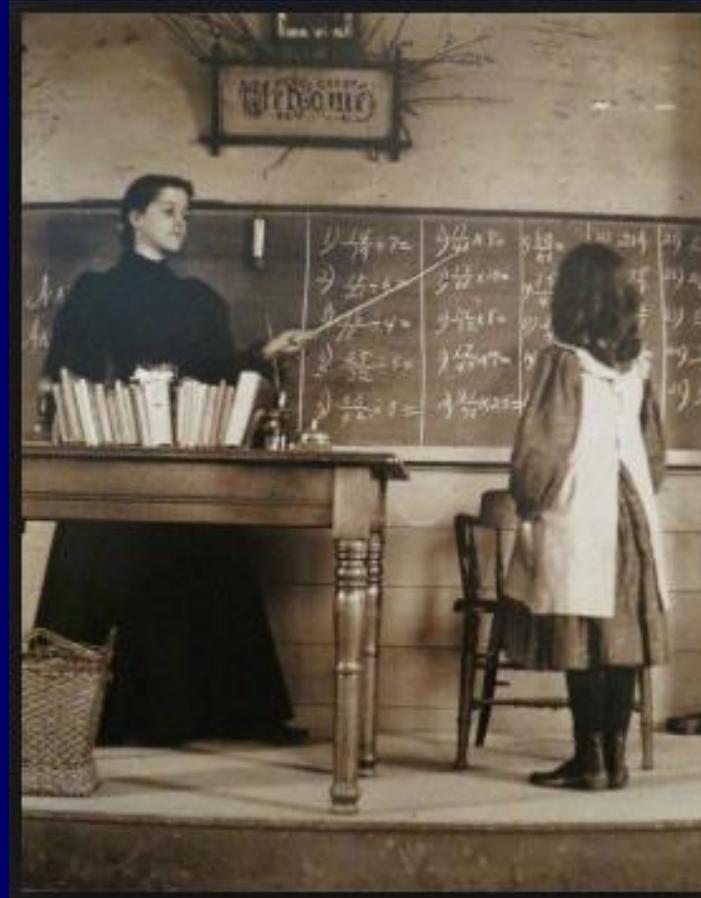
Which of these words would you use to describe mathematics?





Maths

Maths today is a bit different to how some of us might remember being taught it!



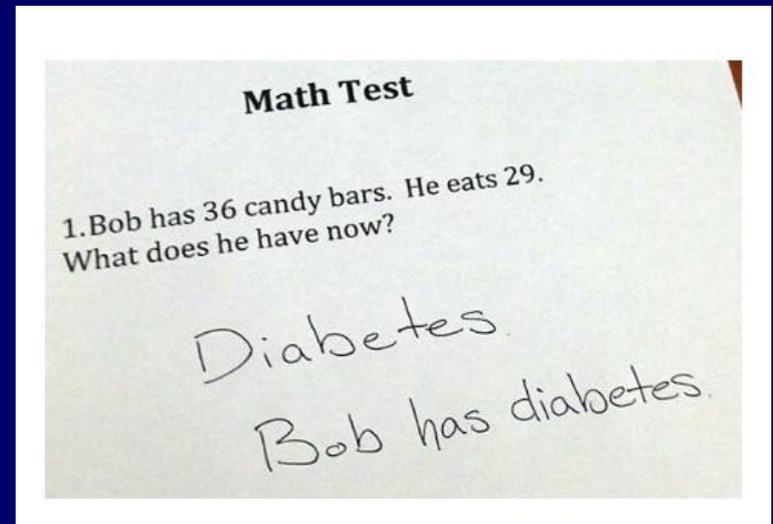
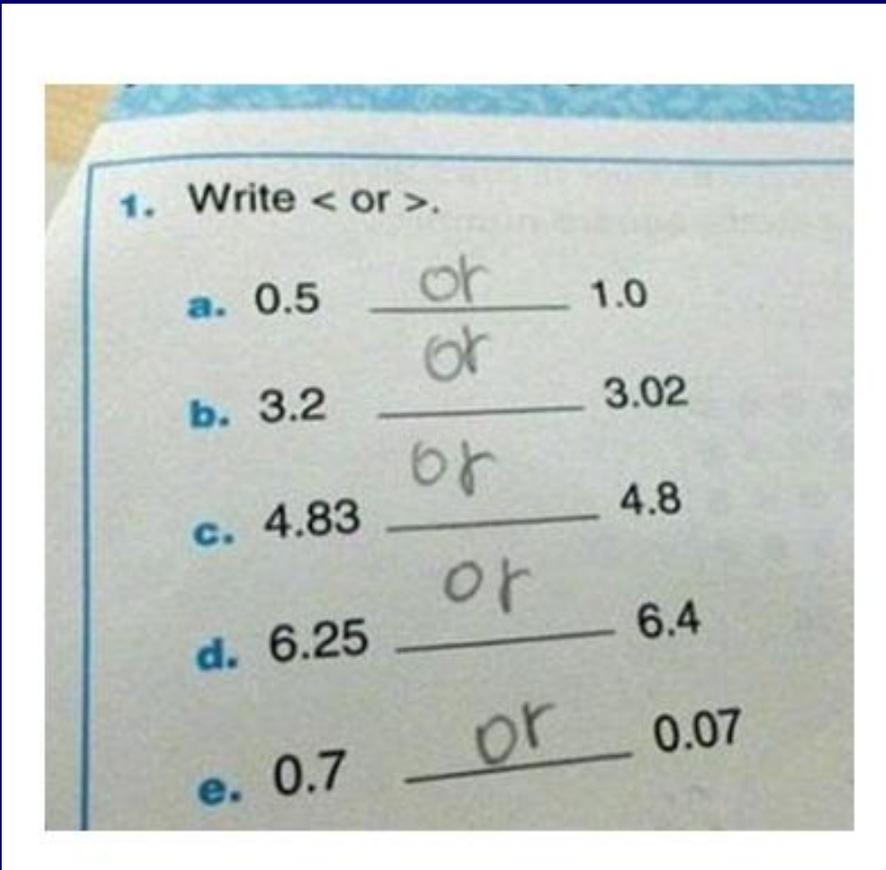


Why we do things differently...

Maths

Q: What's the difference between 9 and 4?

Child's answer: The 9 is curvy and the 4 is all straight!





How we teach maths: National Curriculum 2014

Maths

Aims

Fluency ...Sense of playfulness with number, seeing patterns, seeing numbers within numbers....

Reasoning ...Making sense of maths and explaining connections...

Problem Solving ...Using and applying maths understanding and skills to different contexts/ puzzles ...



Equals... equivalence.. balance

Maths

'Old' style

$$8 + 4 = \underline{\quad}$$

$$4 + 8 = \underline{\quad}$$

$$7 + 5 = 8 + \underline{\quad}$$

$$\square + \square + \square = \square + \square$$

'New style' maths

$$8 + 4 = \square$$

$$12 = \square + 4$$

$$120 = 80 + \square$$

$$7 + \square = 8 + \square$$



Maths

Equals... equivalence.. balance

New

$$7 + \square = 8 + \square$$

$$\square + \square + \square = \square + \square$$

Greater depth

Is it possible to only use odd numbers for the missing boxes?
Or just even numbers?

Using just the digits 1-7?

Can you change the operation
+ - x ÷ and keep the balance?

UKS2 Can this be completed
using prime numbers only?

Mastery approach

- Learning sequences build on each other and help children make connections between mathematical concepts.
- Longer time on key concepts to give secure foundations – not dawdling but deepening
- Time to think deeply about maths - with same focus/pace for most of class but opportunities for broadening and deepening
- An inclusive approach that helps to build self-confidence, with misconceptions tackled as they happen
- Not accelerating onto later year's content or larger numbers – challenge with same concept



Maths



Concrete... pictorial... abstract

Maths

Concrete representation of the addition 3 + 2 = 5. It shows two baskets of fruit: one with 3 red apples and one with 2 green apples. To the right are two pencils, one red and one green.

Pictorial representation of the addition 3 + 2 = 5. It shows 3 red apples and 2 green apples arranged in a row.

Pictorial representation of the addition 3 + 2 = 5. It shows 3 red circles and 2 green circles arranged in a row.

Abstract representation of the addition 3 + 2 = 5. It shows a number line with 5 boxes. The first 3 boxes are red and the last 2 boxes are green. Brackets above the boxes indicate 3 and 2, and a bracket below indicates 5.

$$3 + 2 = \boxed{5}$$



Concrete manipulatives

Maths



I know I have 35 beads on this side and 46 on this side. What will I need to do to find out how many the missing part is equal to?



Maths

Fluency

...Sense of playfulness with number, seeing patterns, seeing numbers within numbers....

$$8 + 9 =$$

Children need strategies beyond using concrete apparatus and counting:

Near doubles

Bridging ten

Rounding and adjusting



Maths

Fluency

...Sense of playfulness with number, seeing patterns, seeing numbers within numbers....

Taken from a Year 4 sequence:-

$$\text{If } 185 + 427 = 612$$

Complete this calculation:

$$162 + \underline{\hspace{2cm}} = 612$$

Explain your strategy.

Year 2: Equal difference

21- 16
is the same as

20-15

Equal difference

but take 1p from each amount

$$\begin{array}{r} 189 \\ - 76 \\ \hline 113 \end{array}$$
$$\begin{array}{r} 179 \\ - 76 \\ \hline 103 \end{array}$$



Maths

Lack of Fluency

Children who leave
KS1 **counting**

3 + 4 on fingers, not secure on
**doubling, halving and basic
number + and - facts**

face a real problem when
learning written methods to add
or subtract in Year 3

Children who leave
Year 4 not knowing all their
times table facts find accessing
calculation work, fractions,
decimals, area much slower in
Years 5 and 6

You can really help support your child at
home to develop their fluency (more later)



Maths

Reasoning

If I know $8 + 9 = 17$, what else do I know?

$$80 + 90 = \quad 8 + 9 = 17 \quad 17 - 8 = 9$$

$$0.8 + 0.9 =$$



Maths

The same is true for multiplication -

Working from the base fact:

$$6 \times 4 = 24$$

What else do we know?

$$4 \times 0.6 = 2.4$$

$$60 \times 40 = 2400$$

$$24 \div 4 = 6$$

$$240 \div 6 = 40$$



Maths

Reasoning

Here are 4 numbers:

What do you notice about these numbers?

8 16 15 23

Which is the odd one out and why?

Explain your reasons



Problem solving

Maths

Multiplication Challenge

A 3 digit number is multiplied by a 2 digit number and the calculation is written out as shown below. Each star like this stands for one digit.



Apart from the zero shown the only digits which occur are 2, 3, 5 and 7. This is sufficient information to complete the whole multiplication.

$$\begin{array}{r}
 * * * \\
 * * * \\
 \hline
 * * * * \\
 * * * * 0 \\
 \hline
 * * * * *
 \end{array}$$

First we found out that we couldn't use a two in the numbers or it would make an even number. From there on it was trial and error. Finally we found that the 3 in the digit number worked so 33 which worked!

$$\begin{array}{r}
 * * * \\
 * * * \\
 \hline
 * * * * \\
 * * * * 0 \\
 \hline
 * * * * *
 \end{array}$$

$$\begin{array}{r}
 775 \\
 \times 33 \\
 \hline
 2325 \\
 23250 \\
 \hline
 25575
 \end{array}$$

Answer

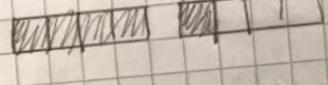


Problem solving

Maths

$\frac{4}{10}, \frac{6}{10}, \frac{9}{10}, \textcircled{1}, \frac{1}{10}, \frac{2}{10}$

1st Lily ate 

3rd Louise ate 

Lily ate $\frac{1}{4}$ more than Louise

Are these statements true or false.

1) False] Why? because $1\frac{1}{2}$ is a mixed number and $\frac{3}{4}$ is a improper fraction so as both of them are mixed number would be $1\frac{1}{2} - \frac{3}{4} = 1\frac{1}{4}$

2) False because you compare the denominator and then the numerator

13. Nathan sold 3 times as many cakes for his local Cub Scout group as Lauren. Finley sold twice as many cakes as Lauren. How many cakes did Nathan sell if they sold 36 cakes altogether?

| | |
|--------|------|
| Lauren | 6 |
| Finley | 12 |
| Nathan | 18 ✓ |

18 Nathan has 18 cakes as more as Lauren. Lauren has 6 cakes. Nathan has double what Lauren has. Half of 36 is 18. $\frac{1}{3}$ of 36 is 12.

14. $6n + 4 = 34$. What is n?

$34 - 4 = 30$
 $30 \div 6 = 5$
 $n = 5$ ✓

15. Olivia has a container that when filled, holds 4 litres of water. She has some empty jugs that can contain $\frac{2}{3}$ of a litre each. How many jugs can she completely fill?

$4 \text{ L} = 12 \text{ rds L}$
 $\frac{12}{3} \text{ rds L} = 4 \text{ rds L}$

17. A vet weighs a large dog and a kitten. The large dog weighs 9 times more than the kitten. Altogether they weigh 22.5kg. What does the dog weigh?

| | | | | | | | |
|------|------|------|------|------|------|------|------|
| 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 |
|------|------|------|------|------|------|------|------|

22.5kg The dog weighs 20.25kg

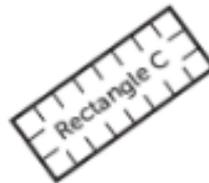
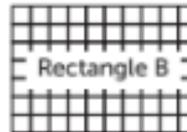
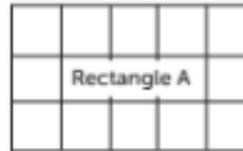


Conversation cartoons

Maths



Shape B has the largest area because it contains the most whole squares. I can see 27 whole squares in that shape.



You can't see all the squares properly. You can still work out the area in squares for Shape A and Shape B because it is like an array and you can use your multiplication facts.

Two people are talking about the area of some rectangles.

Who is right? Prove it!



Talk frames

Maths

Reasoning Speaking Frame

I notice ...

I know ... because ...

If ... then ...

I can work out ...

I know that $\frac{3}{10} < \frac{1}{2}$ a half because $\frac{5}{10} = \frac{1}{2}$ ✓
I know that $\frac{5}{8}$ is $>$ than $\frac{1}{2}$ because $\frac{4}{8} = \frac{1}{2}$ ✓
Therefore $\frac{3}{10} < \frac{1}{2} < \frac{5}{8}$

A) I know that $\frac{123}{260} <$ a half because $\frac{130}{260} = \frac{1}{2}$ ✓
I know that $\frac{314}{630}$ is $<$ a half because $\frac{315}{630} = \frac{1}{2}$ ✓
Therefore $\frac{123}{260} < \frac{1}{2} < \frac{314}{630}$

B) I know that $\frac{252}{506} <$ $\frac{1}{2}$ because $\frac{253}{506} = \frac{1}{2}$ ✓
I know that $\frac{27}{52}$ is $>$ $\frac{1}{2}$ because $\frac{26}{52} = \frac{1}{2}$ ✓
Therefore $\frac{252}{506} < \frac{1}{2} < \frac{27}{52}$

C) I know that $\frac{17}{32}$ is $>$ than a $\frac{1}{2}$ because $\frac{16}{32} = \frac{1}{2}$ ✓
I know that $\frac{89}{176} >$ $\frac{1}{2}$ because $\frac{88}{176} = \frac{1}{2}$ ✓
Therefore $\frac{17}{32} > \frac{1}{2}$ and $\frac{89}{176} > \frac{1}{2}$

D) I know $\frac{1154}{2308} >$ a half because $\frac{1154}{2308} = \frac{1}{2}$ ✓
I know $\frac{1035}{2070} = \frac{1}{2}$ ✓



Maths

Importance of Mathematical Talk

| | |
|--------------|--------------|
| $1024 - 512$ | $754 - 149$ |
| $812 - 562$ | $1003 - 997$ |

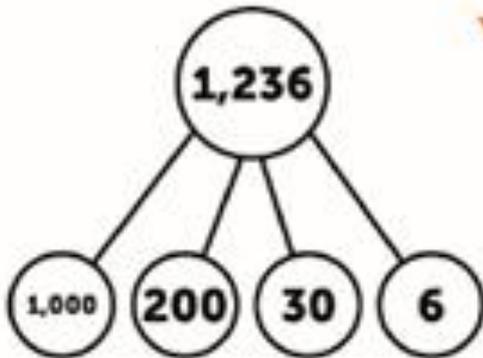
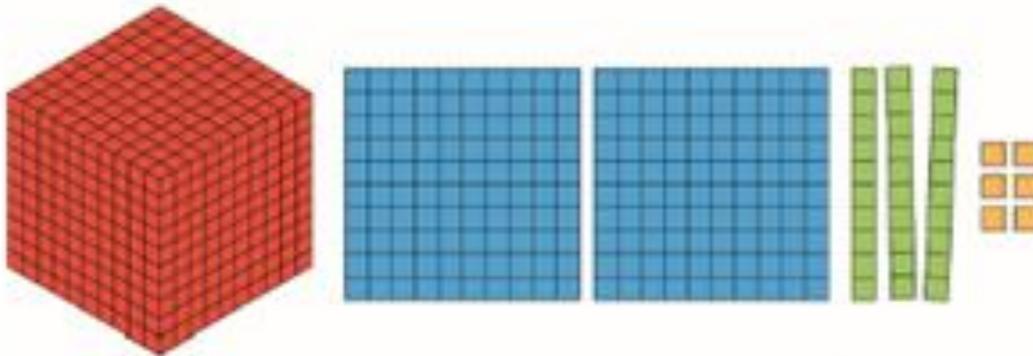
I noticed that... so I chose this strategy because

...



CPA and talk together

Maths



I can see 1 thousand, 2 hundreds, 3 tens and 6 ones.

$$1000 + 200 + 30 + 6$$

It is thirty six more than one thousand, two hundred.

thousands, hundreds, tens and ones.

$$\square\square\square\square + \square\square\square + \square\square + \square = \square\square\square\square$$

Our maths week:



Maths

Core Learning (5 sessions) Herts for Learning Essentials Maths Customised to our learners by additional challenge and carefully crafted practise opportunities sourced by teachers. Includes scaffolds to support the closing of gaps and ARE questions to help assessment.

Fluency Skills - discrete teaching sessions focusing on fluency to keep new skills live, often using games. Weekly arithmetic and number fact practise. E-learning e.g. using *Numbergym*.

Additional pre-teaching and intervention to support children as needed. Cross curricular opportunities to give maths meaning and purpose – science/ topic/ PE etc!

Homework - overlearning number facts, practising of key concepts, topic opportunities (e.g. recipes, statistics).

Ways we approach maths learning in class:



Maths



Calculate the area of each rectangle, then calculate the area of the whole compound shape.

| | |
|---|---|
| <p>1.</p> <p>Area a: _____ cm^2 Area b: _____ cm^2 Total: _____ cm^2</p> | <p>2.</p> <p>Area a: _____ cm^2 Area b: _____ cm^2 Total: _____ cm^2</p> |
| <p>3.</p> <p>Area a: _____ cm^2 Area b: _____ cm^2 Total: _____ cm^2</p> | <p>4.</p> <p>Area a: _____ cm^2 Area b: _____ cm^2 Total: _____ cm^2</p> |
| <p>5.</p> <p>Area a: _____ cm^2 Area b: _____ cm^2 Total: _____ cm^2</p> | <p>6.</p> <p>Area a: _____ cm^2 Area b: _____ cm^2 Total: _____ cm^2</p> |

Destination question:

9

What is the combined area of the rectangles?

What is this measurement?
What clues are there?

Investigate...

Can you draw a **compound shape** of your own in your maths book and then calculate the total area?

Try calculating one by counting the squares inside the shape.

Try a different one by writing the measurements along the lines (like the diagrams)!

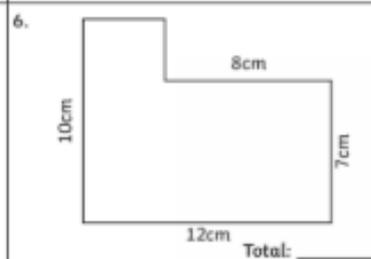
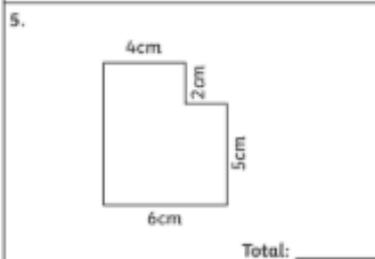
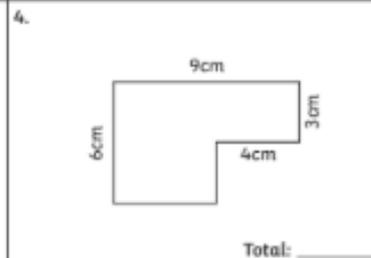
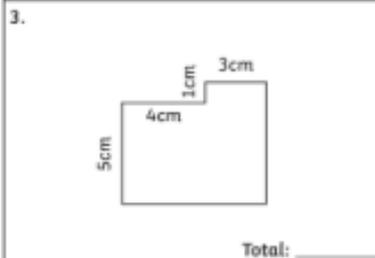
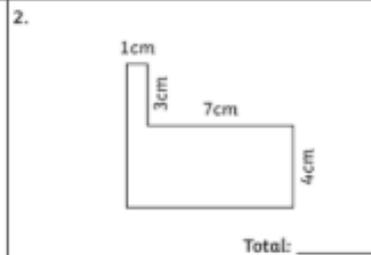
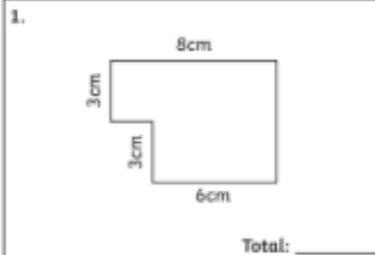
Ways we approach maths learning in class:



Maths

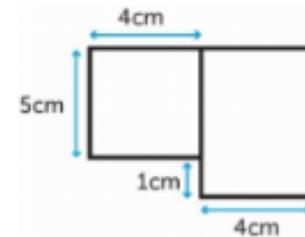


Identify the shapes where the area can be calculated. Calculate the area of each compound shape.



Destination question:

9



What is the combined area of the rectangles?

Investigate...

Can you draw a compound shape in your maths book with an area of 32cm^2 ?
Is there more than one way of doing it?

Ways we approach maths learning in class:



Maths



Destination question:

9

What is the combined area of the rectangles?

Investigate: Can you demonstrate three different ways of calculating this?

Identify the shapes where the area can be calculated. Calculate the area of each compound shape.

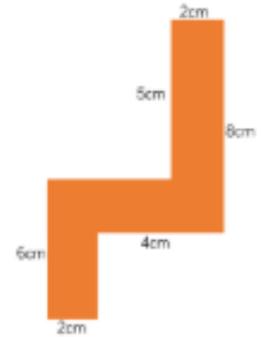
| | |
|-------------------------------|-------------------------------|
| <p>1.</p> <p>Total: _____</p> | <p>2.</p> <p>Total: _____</p> |
| <p>3.</p> <p>Total: _____</p> | <p>4.</p> <p>Total: _____</p> |

Write possible measurements for these shapes based upon the area given.

| | |
|---|--|
| <p>5. Area: $98m^2$</p> <p>a: _____ b: _____ c: _____ d: _____ e: _____ f: _____ g: _____ h: _____</p> | <p>6. Area: $120m^2$</p> <p>a: _____ b: _____ c: _____ d: _____ e: _____ f: _____ g: _____ h: _____ i: _____ j: _____</p> |
|---|--|

Challenge:

Jack has a shape with an area of $34 cm^2$.



Find 3 possible compound shapes that have an area of $34 cm^2$.

Arithmetic

Maths

Weekly Written Arithmetic Questions

| | | | |
|--|---|--|---|
| 1 $\frac{2}{7} + \frac{1}{7} = \frac{3}{7} \checkmark$ | 10 $20 \times 90 = 1800 \checkmark$ | 19 $3,934 - 1,387 = \frac{2547}{\checkmark}$ | 28 $16 \times 6 = 96 \checkmark$ |
| 2 $3.8 \times 10 = 38 \checkmark$ | 11 $50\% \text{ of } 54 = 27 \checkmark$ | 20 $5.3 - 3.2 = 2.1 \checkmark$ | 29 $3^3 \times 4 = 108 \checkmark$ |
| 3 $\frac{3}{4} \times 60 = 45 \checkmark$ | 12 $1,000,000 - 2 = \frac{999,998}{\checkmark}$ | 21 $420 \div 4 = 105 \checkmark$ | 30 $5.7 + 0.07 = 5.77 \checkmark$ |
| 4 $7 + 2 \times 6 = 19 \checkmark$ | 13 $\frac{4}{8} = 0.5 \checkmark$ | 22 $6\frac{2}{6} + \frac{5}{6} = 7\frac{1}{6} \checkmark$ | 31 $45\% \text{ of } 40 = 18 \checkmark$ |
| 5 $63 + \boxed{33} = 96 \checkmark$ | 14 $10\% \text{ of } 120 = 12 \checkmark$ | 23 $2.8 + 21.94 = 24.74 \checkmark$ | 32 $3,744 + 8,304 = \frac{12048}{\checkmark}$ |
| 6 $3 + -4 = -1 \checkmark$ | 15 $\frac{3}{7} \div 3 = \frac{1}{7} \checkmark$ | 24 $7.2 - 2.65 = \frac{4.55}{\checkmark}$ | 33 $362 \times 12 = 4244 \checkmark$ C.4344 C.424 |
| 7 $4 + 7 + 8 + 2 = 21 \checkmark$ | 16 $\frac{4}{7} - \frac{1}{7} = \frac{3}{7} \checkmark$ | 25 $\frac{3}{6} + \frac{1}{12} = \frac{7}{12} \checkmark$ | 34 $2,381 \times 72 = 171432 \checkmark$ |
| 8 $12 \div \boxed{4} = 3 \checkmark$ | 17 $294 + 625 = 919 \checkmark$ | 26 $8 \times \boxed{685} = 5,480 \checkmark$ | 35 $7,579 \div 11 = 689 \checkmark$ |
| 9 $\frac{4}{9} + \frac{1}{9} = \frac{5}{9} \checkmark$ | 18 $6.9 + 8.6 = 15.5 \checkmark$ | 27 $\frac{2}{4} \times \frac{1}{2} = \frac{1}{4} \checkmark$ | 36 $3,276 \div 14 = 234 \checkmark$ |

Additional fluency in class

Maths

Year 6 Maths Activity Mat

Section 1 ✓
At 6am, the temperature is -3°C . By midday the temperature has risen by 11°C . In the following 11 hours, the temperature falls by 14°C . What is the temperature at 11pm?
-6

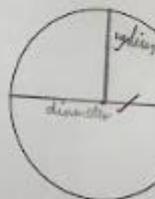
Section 2 ✓
Calculate in your head:
 $254 + 340 = 594$ ✓
 $281 + 412 = 693$ ✓
 $756 - 106 = 650$ ✓
 $501 - 89 = 410$ ✓ +12

Section 3 ✓
Calculate:
 $11 - (7 + 2) = 99$ ✓
 $9 \div 5 \times 5 = 34$ ✓
 $(21 + 9) \div 3 = 10$ ✓

Section 4 ✓
Circle any fraction and decimal equivalent to $\frac{1}{2}$.
 0.3 ✗ $\frac{1}{2}$ ✓ $\frac{3}{6}$ ✓ $\frac{1}{4}$ ✗ $\frac{2}{4}$ ✓

Section 5 ✓
Angela has $\pounds 5.24$ in her purse, $\pounds 17.29$ in her bank account and $\pounds 2.67$ in her pocket. How much money has she altogether, rounded to the nearest pound?
 $\pounds 25.00$

Section 6 ✓ LXWxHxV
Calculate the volume of this cuboid.
 180cm^3

Section 7 ✓
Draw the radius and the diameter of this circle.


Week 1 Day 2

Menu

Place Value
Write one million, four hundred and seventeen in numerals.
Reveal answer

+ and -
Solve this column subtraction:
$$\begin{array}{r} 122366 \\ - 87722 \\ \hline 034644 \end{array}$$

Reveal answer

x and ÷
 $3244 \div 4 = \square$
Reveal answer

Fractions
What number is hidden in these equivalent fractions?
 $\frac{4}{\square} = \frac{16}{20}$
Reveal answer

Problem Solving
If each pentagon is worth 10, what is the total of the pentagons?

Reveal answer

Reasoning
"A triangular prism has 6 vertices."
Is Alison correct?
Explain your reasoning.


Programme of Study: See Y5 and Y6 Year on a page document



Maths

Year 5 programme of study (statutory requirements)

| Number and place value | Addition and subtraction | Multiplication and division | Fractions (including decimals and percentages) | Measurement | Geometry: properties of shapes | Geometry: position and direction | Statistics |
|--|--|---|--|--|--|--|--|
| <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above read Roman numerals to 1000 (M) and recognise years written in Roman numerals | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers multiply and divide numbers mentally drawing upon known facts divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> compare and order fractions whose denominators are all multiples of the same number identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $>$ 1 as a mixed number [for example, $\frac{7}{5} + \frac{4}{5} = 1\frac{1}{5}$] add and subtract fractions with the same denominator and multiples of the same number multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with two decimal places to the nearest whole number and to one decimal place read, write, order and compare numbers with up to three decimal places solve problems involving number up to three decimal places recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator 100, and as a decimal solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25 | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; millimetre and centimetre and kilogram; litre and millilitre) understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangles (including squares) using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes estimate volume (for example, using 1 cm^3 blocks to build cuboids (including cubes)) and capacity (for example, using water) solve problems involving converting between units of time use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation including scaling | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> identify 3-D shapes, including cubes and other cuboids, from 2-D representations know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles draw given angles, and measure them in degrees ($^\circ$) identify: <ul style="list-style-type: none"> angles at a point and one whole turn (total 360°) angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) other multiples of 90° use the properties of rectangles to deduce related facts and find missing lengths and angles distinguish between regular and irregular polygons based on reasoning about equal sides and angles | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables |



Year 5 and 6 Learning in Action!

Maths





Year 5 – Spring term

The National Curriculum, detailed Programmes of Study, and Year group learner documents are all on the school website. You can also find information about what's coming up in maths on our termly class newsletter.

Maths

| Term 2 | | |
|------------------|-------|--|
| Week One | 5LS16 | Problem Solving – All Four Operations |
| Week two | 5LS17 | Multiply Fractions by Whole Numbers |
| | 5LS18 | Fraction Problem Solving |
| Week three | 5LS19 | Measure: Converting Units of Measure |
| Week four - five | 5LS20 | Area |
| | 5LS21 | Volume and Capacity |
| Week six - seven | 5LS22 | Percentages |
| | 5LS23 | Problem Solving - Percentages |
| Week eight | 5LS24 | 3-D Shapes from 2-D Representations |
| | 5LS25 | Reflection and Translation |
| Week nine - ten | 5LS26 | Perimeter |
| | 5LS27 | Estimate, Compare, Measure and Draw Angles |
| | 5LS28 | Identify Unknown Angles |



Year 6 – Spring term

The National Curriculum, detailed Programmes of Study, and Year group learner documents are all on the school website. You can also find information about what's coming up in maths on our termly class newsletter.

Maths

Term 2

| | | |
|-------------------|-------------------------|---|
| Week one | 6LS16 | Order of Operations and Algebra |
| Week two | 6LS17 | Formal Written Method for Long Division |
| Week three | 6LS18 | Exploring Relationships Between Perimeter and Area |
| Week four | 6LS19 6LS20 | Recognise and Find Angles Reflection and Translation |
| Week five and six | 6LS21 6LS22 6LS23 | Multiplying Fractions Dividing Fractions Fraction Problem Solving |
| Week seven | 6LS24 | Ratio and Proportion |
| Week eight | 6LS25 6LS26 | Volume Measures |
| Week nine | 6LS27 | Statistics – Interpret Line Graphs and Pie Charts |
| Week ten | 6LS28 | Algebra and Sequences |

Year 6 SATS wb 13/5/19



Maths

| Time | Monday | Tuesday | Wednesday | Thursday |
|-------------------------|--|---------------------------|--|--|
| 1 st session | Reading Comprehension 1 hour | GAPS 45 minutes | Maths paper 1: Arithmetic 30 minutes | Maths test 3: Reasoning 45 minutes |
| | Break | Break | Break | Break |
| 2 nd session | Spelling test No time limit | | Maths test 2: Reasoning 45 minutes | |

We have been preparing the children for these tests in the best way we feel to ensure they know: what the week will look like, what the tests will be like and how they will tackle them with our support as needed. We have been proud of how the children have tackled these so far.

They have had two sets of Mock SATs papers since and will have one more nearer to Easter.

Any extra practice they want to do at home is always beneficial and you can purchase SATS practice books.

In school we use the CPG books as well as tailored extra practice as the children identify what they want to work on. This is often identified and completed in booster group sessions in small groups on a Monday and will also be in the breakfast booster session we will run soon.



Maths

Enjoying maths at home

1. Praise your child for effort
2. When checking homework, celebrate mistakes as learning points – take the time to go through it with before they say its done.
3. All mistakes are beautiful and a learning opportunity!
4. Try not to show frustration. Take a break, let everyone calm down and come back to it
5. Do not pressurise children. Whilst knowing times tables is important, it doesn't make you a bad mathematician if you can't remember them.
6. Don't describe yourself as useless at maths
7. Show yourself to be curious about maths and playful with numbers. Make it fun!



Maths

How can parents help at home

- Any counting and dice games, card games, any maths games!
- Look for Maths in the Every Day (next slide)
- Practise quick fire number facts at home
 - + and – facts to 10, 20
 - x tables
 - base facts

Come in and ask us if you need advice!



Maths in the Every Day





Maths

Need help with strategies?

- School Journals – contain examples of written methods we use, explanations of fractions, shapes, perimeter, area, rounding, time etc
- Lots of detail!
- Please look at them and encourage children to use them to support homework

Come in and ask us if you need advice!

E-learning that supports maths and children can log onto free from home



'Numbergym'

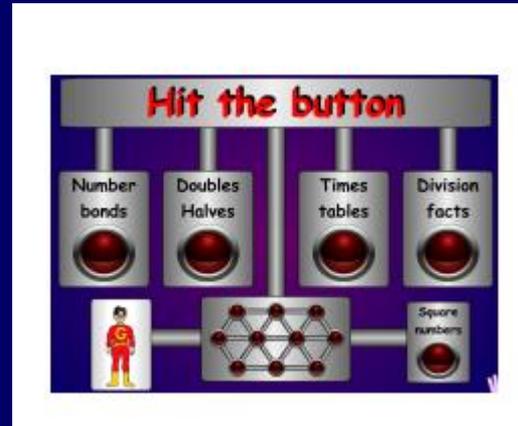
www.numbergym.co.uk

User name: ashwell

Password: silver

This is an excellent resource
to help with learning
in all areas of maths.

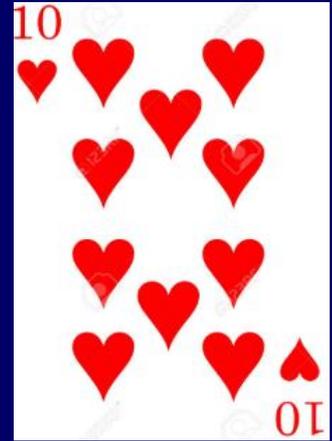
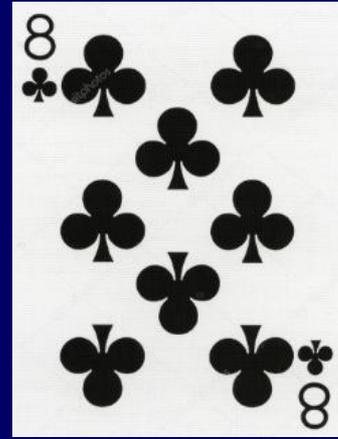
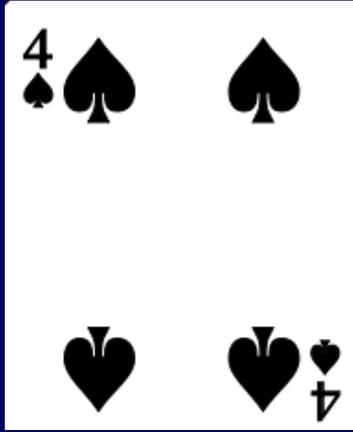
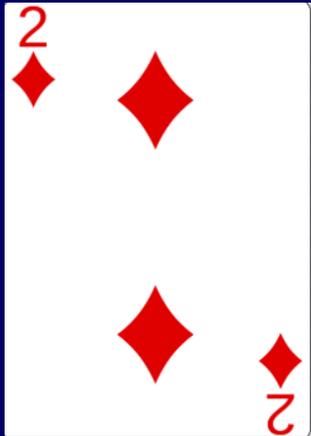
Bond Builder and Table Trainer
are accessible via tablet.



Let's give you one more challenge!



Maths



Select some cards...

What numbers can you make with these cards when you put them in a number sentence?

Examples...

$$10 - 8 = 2$$

$$8 \div 2 = 4$$

$$10 - 1 \times 2 = 18$$

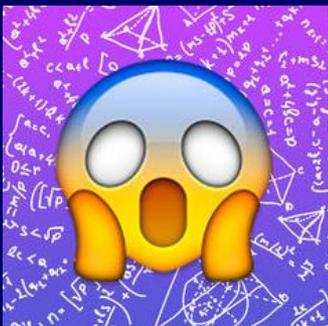
$$10 \times 8 \times 2 = 160$$



Maths

Many thanks for attending tonight.
We hope you have found it useful.

Please fill in our evaluation survey.



Mrs Wild's talk about mental health
begins at 7pm in the main hall!