Maths
Year Group: 6+

Place Value

Read, write and order numbers up to 10,000,000.

Put a number in the missing space below to make the sentence correct.
4_236460 > 46236460

Use negative numbers in context

3	-8	-6
-4	2	-7

Use the cards to complete the calculations below.
___ + ___ = ___

___ - ___ = ___

Round any number to the nearest 100,000, 10,000, 1000, 100 and 10.

315 → 320 Nearest 10
455 → 500 Nearest 100
1595 → 2000 Nearest 1000

Multiply and divide by 10, 100, 1000 including decimals

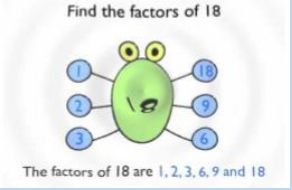
Number Knowledge

Know prime numbers and prime factors

Identify **common multiples and common factors.**

Multiples are all the numbers in a times table.
Eg. The multiples of 2 are all the numbers in the 2 times table: 2, 4, 6, 8, 10 and so on.

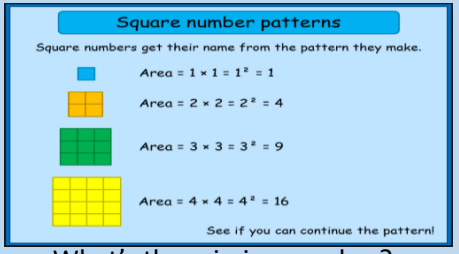
Factors: Numbers that you can divide a bigger number by e.g.



Clare's age is a multiple of 7 and 3 less than a multiple of 8. How old is Clare?

Nancy is double her sister's age. They are both older than 20 and younger than 50. They are both multiples of 7. How old are they?

Recognise and use squared and cubed numbers



What's the missing number?

a and b stand for whole numbers.
a + b = 1000 and a is 150 greater than b.
Work out the values of a and b.

7 pears and 1 banana cost 57p.
3 bananas, 1 pear and 2 apples cost 41p.
1 pear, 2 apples and 2 bananas cost 33p.
How much does 1 piece of each fruit cost?

Can you write each of the sentences above as a formula?

Calculation

Add and **subtract** any 1000s number from any 5-digit number.

Abdul says "If I add any two 4 digit numbers together is will make a 5 digit number." Do you agree? Explain why.

Katie was given the calculation below
47326 – 1900 =
She said "I will just take off 2000 then subtract another 100 so my answer is 45126." Is she correct? Would you use her method? Explain your answer.

Multiply numbers up to 4-digits by a 1-digit and 2-digit number using an efficient written method.

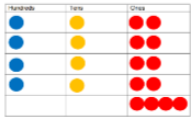
- A class are solving multiplication problems using counters. One child arranges their counters like the diagram below.

The question is 23 x 3 =

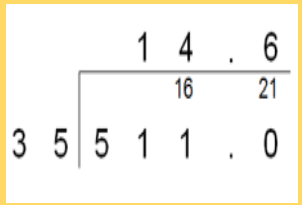
Is this the only way to represent this calculation? How many ways can you find?

Divide numbers up to 4-digits by a 2-digit number using short division written method.

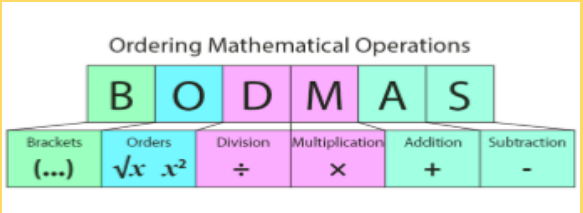
A class were using place value counter to complete the calculation 112 ÷4.
One child arranged her counters like this.



What mistake has she made? Can you show me how to do it correctly?



Ordering operations to carry out calculations



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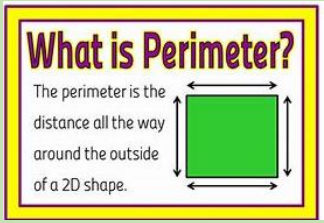
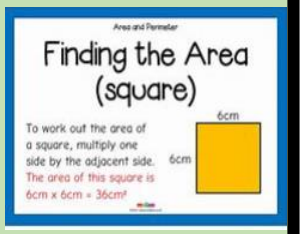
Shape

Perimeter and area

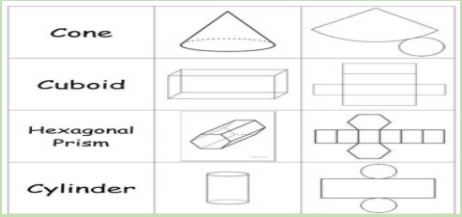
- Three children are given the same shape to draw. They each give a clue.
  Kate says, "The smallest length is 4cm."
  Lucy says, "The area is less than 30cm^2."
  Ash says, "The perimeter is 22cm."

What are the lengths of the quadrilateral?





Nets



Parts of a circle

"The bigger the radius of a circle, the bigger the diameter."

Do you agree? Explain your reasoning.

Fractions, decimals, percentages

Use equivalent fractions to compare and order fractions. Order fractions greater than 1. Simplify fractions.

Sallie insists she had more pizza than her sister because she had $\frac{6}{8}$ of hers and her sister had $\frac{5}{6}$. Is she correct? Explain how you know.

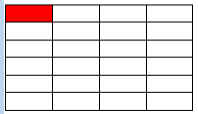
Look at the calculation below. Work out the missing parts.

$\_ \div \_ = \frac{4}{36}$

How many different ways can you find?

Multiply decimals

- The shaded square in the grid below is the answer to a multiplying fractions question. If that is the answer, what is the question?



4.56 x 7

	7
4	28
0.5	3.5
0.06	4.2

After adding up, Tanya says her answer is 35.7.

Is Tanya correct?

Explain your reasoning.

Write decimals as fractions and percentages

A golf club has 200 members.
58% of the members are male.
50% of the female members are children.

a) How many male members are in the golf club?
b) How many female children are in the golf club?

Measure

Converting measurements

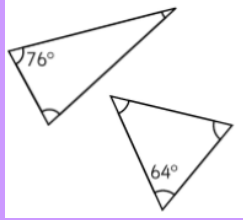
Agree or disagree?
It is easier to convert from miles to kilometres rather than kilometres to miles.
Explain your answer.

Michael ran the London Marathon which was 26.2miles. Shafi ran 42 kilometres in a charity race over 3 days. Who ran the furthest?

Angles

Acute - Less than 90°
Straight Line - 180°
Obtuse - Greater than 90° and less than 180°
Reflex - Greater than 180°, but less than 360°
Full Rotation - 360°
Angles in a quadrilateral - 360°
Angles in a triangle - 180°
Angles around a point - 360°

- Find the missing angles in the isosceles triangles.



If one angle in an isosceles triangle is 42°, what might the triangle look like?

Draw it.
Are there any other possibilities?