

# Mathematical Vocabulary Book

## INTRODUCTION

### Who is this book for?

The purpose of this book is to identify the words and phrases that children need to understand and use if they are to make good progress in mathematics. It is designed to support the National Numeracy Strategy alongside the *Framework for Teaching Mathematics*.

**This booklet will be of particular interest to you if you are:**

- a class teacher
  - a member of staff supporting pupils learning English as an additional language
  - a special needs teacher or assistant
  - a classroom assistant working with pupils in mathematics lessons
  - a parent or other adult supporting children in class or at home
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### Why is the book needed?

There are three main ways in which children's failure to understand mathematical vocabulary may show itself: children do not respond to questions in lessons, they cannot do a task they are set and/or they do poorly in tests.

Their lack of response may be because:

**they do not understand the spoken or written instructions,**  
such as 'draw a line between...', 'ring...' or 'find two different ways to...'

**they are not familiar with the mathematical vocabulary,**  
that is, words such as 'difference', 'subtract', 'divide' or 'product'

**they may be confused about mathematical terms,**  
such as 'odd' or 'table', which have different meanings in everyday English

**they may be confused about other words,**  
like 'area' or 'divide', which are used in everyday English and have similar, though more precise, meanings in mathematics

There are, then, practical reasons why children need to acquire appropriate vocabulary so that they can participate in the activities, lessons and tests that are part of classroom life. There is, however, an even more important reason: mathematical language is crucial to children's development of thinking. If children don't have the vocabulary to talk about division, or perimeters, or numerical difference, they cannot make progress in understanding these areas of mathematical knowledge.

## How is the book organised and how can it be used?

To help you introduce appropriate mathematical language at the right time, this book provides four pages of vocabulary checklists for each year group. The first three pages for each year cover mathematical vocabulary relating to the *Framework for Teaching Mathematics*, organised according to its five strands:

numbers and the number system

calculations

solving problems

handling data

measures, shape and space

Using and Applying Mathematics is integrated throughout.

The fourth page for each year group lists the language commonly used when giving instructions about mathematical problems, both in questions in national tests and in published resources.

The words listed for each year include vocabulary from the previous year, with **new words for the year printed in red** from Year 1 onwards. Some words may appear under different strands in different years, as their meaning is expanded or made more specific.

Class teachers can use these lists to identify the vocabulary relating to a series of lessons they are planning. They can make provision for the introduction of new vocabulary and the consolidation of familiar terms. They can ask support staff and parents to emphasise this vocabulary for an appropriate period.

The checklists are not intended to be exhaustive; you can add more words if you would like to do so.

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## How do children develop their understanding of mathematical vocabulary?

Teachers often use informal, everyday language in mathematics lessons before or alongside technical mathematical vocabulary. Although this can help children to grasp the meaning of different words and phrases, you will find that a structured approach to the teaching and learning of vocabulary is essential if children are to move on and begin using the correct mathematical terminology as soon as possible.

Some children may start school with a good understanding of mathematical words when used informally, either in English or their home language. Find out the extent of their mathematical vocabulary and the depth of their understanding, and build on this.

You need to plan the introduction of new words in a suitable context, for example, with relevant real objects, mathematical apparatus, pictures and/or diagrams. Explain their meanings carefully and rehearse them several times. Referring to new words only once will do little to promote learning. Encourage their use in context in oral sessions, particularly through your questioning. You can help sort out any ambiguities or misconceptions your pupils may have through a range of open and closed questions. Use every opportunity to draw attention to new words or symbols with the whole class, in a group or when talking to individual pupils. The final stages are learning to read and write new mathematical vocabulary in a range of circumstances, ultimately spelling the relevant words correctly.

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## **Regular, planned opportunities for development**

It is not just younger children who need regular, planned opportunities to develop their mathematical vocabulary. All children throughout Key Stages 1 and 2 need to experience a cycle of oral work, reading and writing as outlined below.

### **oral work based on practical work**

so that they have visual images and tactile experience of what mathematical words mean in a variety of contexts

### **other forms of oral work**

so that they have opportunities to:

- listen to adults and other children using the words correctly
- acquire confidence and fluency in speaking, using complete sentences that include the new words and phrases, sometimes in chorus with others and sometimes individually
- describe, define and compare mathematical properties, positions, methods, patterns, relationships, rules
- discuss ways of tackling a problem, collecting data, organising their work...
- hypothesise or make predictions about possible results
- present, explain and justify their methods, results, solutions or reasoning, to the whole class or to a group or partner
- generalise, or describe examples that match a general statement

### **reading aloud and silently, sometimes as a whole class and sometimes individually,**

for example, reading:

- numbers, signs and symbols, expressions and equations in blackboard presentations
- instructions and explanations in workbooks, textbooks, CD-ROMs...
- texts with mathematical references in fiction and non-fiction books and books of rhymes during the literacy hour as well as mathematics lessons
- labels and captions on classroom displays, in diagrams, graphs, charts and tables...
- definitions in illustrated dictionaries, including dictionaries that they themselves have made, in order to discover synonyms, origins of words, words that start with the same group of letters (such as triangle, tricycle, triplet, trisect...)

### **writing and recording in a variety of ways, progressing from words, phrases and short sentences to paragraphs and longer pieces of writing,** for example:

- writing prose in order to describe, compare, predict, interpret, explain, justify...
- writing formulae, first using words, then symbols
- sketching and labelling diagrams in order to clarify their meaning
- drawing and labelling graphs, charts or tables, and interpreting and making predictions from the data in them, in mathematics and other subjects



## The skill of questioning

Children cannot learn the meanings of words in isolation. The use of questions is crucial in helping them to understand mathematical ideas and use mathematical terms correctly.

It is important to ask questions in different ways so that children who do not understand the first time may pick up the meaning subsequently. Pupils for whom English is an additional language benefit and so will others who are not always familiar with the vocabulary and grammatical structures used in school.

It is easy to use certain types of questions — those that ask the listener to recall and apply facts — more often than those that require a higher level of thinking. If you can use the full range of question types you will find that children begin to give more complex answers in which they explain their thinking.

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## Types of question

### Recalling facts

What is 3 add 7?

How many days are there in a week?

How many centimetres are there in a metre?

Is 31 a prime number?

### Applying facts

Tell me two numbers that have a difference of 12.

What unit would you choose to measure the width of the table?

What are the factors of 42?

### Hypothesising or predicting

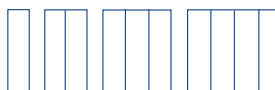
Estimate the number of marbles in this jar.

If we did our survey again on Friday, how likely is it that our graph would be the same?

Roughly, what is 51 times 47?

How many rectangles in the next diagram?

And the next?



### Designing and comparing procedures

How might we count this pile of sticks?

How could you subtract 37 from 82?

How could we test a number to see if it is divisible by 6?

How could we find the 20th triangular number?

Are there other ways of doing it?

### Interpreting results

So what does that tell us about numbers that end in 5 or 0?

What does the graph tell us about the most common shoe size?

So what can we say about the sum of the angles in a triangle?

### Applying reasoning

The seven coins in my purse total 23p. What could they be?

In how many different ways can four children sit at a round table?

Why is the sum of two odd numbers always even?



# On this and the following page are further examples of questions to help you promote good dialogue and interaction in mathematics lessons

Below are examples of **closed questions** with just one correct answer and **open questions** which have a number of different correct answers. Open questions give more children a chance to respond and they often provide a greater challenge for higher attaining pupils, who can be asked to think of alternative answers and, in suitable cases, to count all the different possibilities.

## Closed questions

Count these cubes.

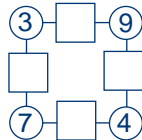
A chew costs 3p. A lolly costs 7p.  
What do they cost altogether?

What is  $6 - 4$ ?

What is  $2 + 6 - 3$ ?

Is 16 an even number?

Write a number in each box so that it equals the sum of the two numbers on each side of it.



Copy and complete this addition table.

+	4	7
2		
6		

What are four threes?

What is  $7 \times 6$ ?

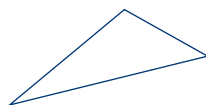
How many centimetres are there in a metre?

Continue this sequence: 1, 2, 4...

What is one fifth add four fifths?

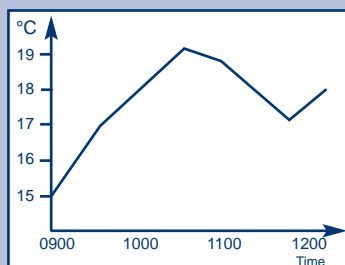
What is 10% of 300?

What is this shape called?



This graph shows room temperature on 19 May.

What was the temperature at 10.00 am?



## Open questions

How could we count these cubes?

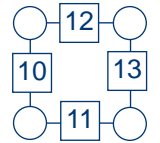
A chew and a lolly cost 10p altogether. What could each sweet cost?

Tell me two numbers with a difference of 2.

What numbers can you make with 2, 3 and 6?

What even numbers lie between 10 and 20?

Write a number in each circle so that the number in each box equals the sum of the two numbers on each side of it. Find different ways of doing it.



Find different ways of completing this table.

	3	4
	7	

Tell me two numbers with a product of 12.

If  $7 \times 6 = 42$ , what else can you work out?

Tell me two lengths that together make 1 metre.

Find different ways of continuing this sequence: 1, 2, 4...

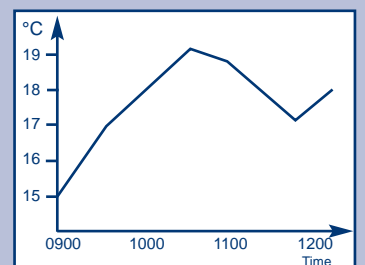
Write eight different ways of adding two numbers to make 1.

Find ways of completing: ...% of ... = 30

Sketch some different triangles.

This graph shows room temperature on 19 May.

Can you explain it?





## Questions that can help to extend children's thinking

### Ask children who are getting started with a piece of work:

How are you going to tackle this?

What information do you have? What do you need to find out or do?

What operation/s are you going to use?

Will you do it mentally, with pencil and paper, using a number line, with a calculator...? Why?

What method are you going to use? Why?

What equipment will you need?

What questions will you need to ask?

How are you going to record what you are doing?

What do you think the answer or result will be?  
Can you estimate or predict?

### Make positive interventions to check progress while children are working, by asking:

Can you explain what you have done so far?  
What else is there to do?

Why did you decide to use this method or do it this way?

Can you think of another method that might have worked?

Could there be a quicker way of doing this?

What do you mean by...?

What did you notice when...?

Why did you decide to organise your results like that?

Are you beginning to see a pattern or a rule?

Do you think that this would work with other numbers?

Have you thought of all the possibilities? How can you be sure?

### Ask children who are stuck:

Can you describe the problem in your own words?

Can you talk me through what you have done so far?

What did you do last time? What is different this time?

Is there something that you already know that might help?

Could you try it with simpler numbers... fewer numbers... using a number line...?

What about putting things in order?

Would a table help, or a picture/diagram/graph?

Why not make a guess and check if it works?

Have you compared your work with anyone else's?

### During the plenary session of a lesson ask:

How did you get your answer?

Can you describe your method/pattern/rule to us all? Can you explain why it works?

What could you try next?

Would it work with different numbers?

What if you had started with... rather than...?

What if you could only use...?

Is it a reasonable answer/result? What makes you say so?

How did you check it?

What have you learned or found out today?

If you were doing it again, what would you do differently?

Having done this, when could you use this method/information/idea again?

Did you use any new words today? What do they mean? How do you spell them?

What are the key points or ideas that you need to remember for the next lesson?

# Mathematical Vocabulary Checklists

## RECEPTION to YEAR 6

# RECEPTION

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## Counting and recognising numbers

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### COUNTING

number  
zero, one, two, three... to twenty and beyond  
zero, ten, twenty... one hundred  
none  
how many...?  
count, count (up) to  
count on (from, to)  
count back (from, to)  
count in ones, twos... tens...  
more, less, many, few  
odd, even  
every other  
how many times?  
pattern, pair  
guess how many, estimate  
nearly, close to, about the same as  
just over, just under  
too many, too few, enough, not enough

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### COMPARING AND ORDERING NUMBERS

the same number as, as many as  
*Of two objects/amounts:*  
greater, more, larger, bigger  
less, fewer, smaller  
*Of three or more objects/amounts:*  
greatest, most, biggest, largest  
least, fewest, smallest  
one more, ten more  
one less, ten less  
compare  
order  
size  
first, second, third... tenth  
last, last but one  
before, after  
next  
between  
above, below

## Adding and subtracting

add, more, and  
make, sum, total  
altogether  
score  
double  
one more, two more, ten more...  
how many more to make... ?  
how many more is... than...?  
take (away), leave  
how many are left/left over?  
how many have gone?  
one less, two less... ten less...  
how many fewer is... than...?  
difference between  
is the same as



## Solving problems

### REASONING ABOUT NUMBERS OR SHAPES

pattern  
puzzle  
answer  
right, wrong  
what could we try next?  
how did you work it out?  
count, sort  
group, set  
match  
same, different  
list

### PROBLEMS INVOLVING 'REAL LIFE' OR MONEY

compare  
double  
half, halve  
pair  
count out, share out  
left, left over

money  
coin  
penny, pence, pound  
price  
cost  
buy  
sell  
spend, spent  
pay  
change  
dear, costs more  
cheap, costs less, cheaper  
costs the same as  
how much...? how many...?  
total

## Measures, shape and space

### MEASURES (GENERAL)

measure  
size  
compare  
guess, estimate  
enough, not enough  
too much, too little  
too many, too few  
nearly, close to, about the same as  
just over, just under

### LENGTH

length, width, height, depth  
long, short, tall  
high, low  
wide, narrow  
deep, shallow  
thick, thin  
longer, shorter, taller, higher... and so on  
longest, shortest, tallest, highest... and so on  
far, near, close

### MASS

weigh, weighs, balances  
heavy/light, heavier/lighter, heaviest/lightest  
balance, scales, weight

### CAPACITY

full  
half full  
empty  
holds  
container

### TIME

time  
*days of the week:* Monday, Tuesday...  
day, week  
birthday, holiday  
morning, afternoon, evening, night  
bedtime, dinnertime, playtime  
today, yesterday, tomorrow  
before, after  
next, last  
now, soon, early, late  
quick, quicker, quickest, quickly  
slow, slower, slowest, slowly  
old, older, oldest  
new, newer, newest  
takes longer, takes less time  
hour, o'clock  
clock, watch, hands

# RECEPTION

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## EXPLORING PATTERNS, SHAPE AND SPACE

shape, pattern  
flat  
curved, straight  
round  
hollow, solid  
corner  
face, side, edge, end  
sort  
make, build, draw

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## 3D SHAPES

cube  
pyramid  
sphere  
cone

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## 2D SHAPES

circle  
triangle  
square  
rectangle  
star

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## PATTERNS AND SYMMETRY

size  
bigger, larger, smaller  
symmetrical  
pattern  
repeating pattern  
match

## POSITION, DIRECTION AND MOVEMENT

position  
over, under  
above, below  
top, bottom, side  
on, in  
outside, inside  
around  
in front, behind  
front, back  
before, after  
beside, next to  
opposite  
apart  
between  
middle, edge  
corner  
direction  
left, right  
up, down  
forwards, backwards, sideways  
across  
close, far, near  
along  
through  
to, from, towards, away from  
movement  
slide  
roll  
turn  
stretch, bend

## Instructions

listen  
join in  
say

think  
imagine  
remember

start from  
start with  
start at

look at  
point to  
show me

put, place  
fit

arrange  
rearrange  
change, change over  
split  
separate

carry on, continue  
repeat  
what comes next?

find  
choose  
collect

use  
make  
build

tell me  
describe  
pick out  
talk about  
explain  
show me

read  
write  
trace  
copy  
complete  
finish, end

fill in  
shade  
colour

tick, cross  
draw  
draw a line between  
join (up)  
ring  
cost  
count  
work out  
answer  
check

## General

same number/s  
different number/s  
missing number/s  
number facts

number line, number track  
number square  
number cards  
counters, cubes, blocks, rods  
die, dice  
dominoes  
pegs, peg board

same way, different way  
best way, another way  
in order, in a different order

not  
all, every, each

## Numbers and the number system

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### COUNTING, PROPERTIES OF NUMBERS AND NUMBER SEQUENCES

number  
zero, one, two, three... to twenty and beyond  
zero, ten, twenty... one hundred  
none  
how many...?  
count, count (up) to  
count on (from, to)  
count back (from, to)  
count in ones, twos... tens...  
more, less, many, few  
odd, even  
every other  
how many times?  
pattern, pair

### PLACE VALUE AND ORDERING

units, ones  
tens  
exchange  
digit  
'teens' number  
the same number as, as many as  
equal to  
*Of two objects/amounts:*  
greater, more, larger, bigger  
less, fewer, smaller  
*Of three or more objects/amounts:*  
greatest, most, biggest, largest  
least, fewest, smallest  
one more, ten more  
one less, ten less  
compare  
order  
size  
first, second, third... tenth, eleventh... twentieth  
last, last but one  
before, after  
next  
between, half-way between  
above, below

### ESTIMATING

guess how many, estimate  
nearly, roughly, close to  
about the same as  
just over, just under  
too many, too few, enough, not enough

## Calculations

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### ADDITION AND SUBTRACTION

+, add, more, plus  
make, sum, total  
altogether  
score  
double, near double  
one more, two more... ten more  
how many more to make...?  
how many more is... than...?  
how much more is...?  
-, subtract, take (away), minus  
leave  
how many are left/left over?  
how many have gone?  
one less, two less, ten less...  
how many fewer is... than...?  
how much less is...?  
difference between  
half, halve  
=, equals, sign, is the same as

## Solving problems

### MAKING DECISIONS AND REASONING

pattern  
 puzzle  
 answer  
 right, wrong  
 what could we try next?  
 how did you work it out?  
 count out, share out, left, left over  
 number sentence  
 sign, operation

### MONEY

money  
 coin  
 penny, pence, pound  
 price  
 cost  
 buy  
 sell  
 spend, spent  
 pay  
 change  
 dear, costs more  
 cheap, costs less, cheaper  
 costs the same as  
 how much...? how many...?  
 total

## Organising and using data

count, sort, vote  
 group, set  
 list  
 same, different  
 table

## Measures, shape and space

### MEASURES (GENERAL)

measure  
 size  
 compare  
 guess, estimate  
 enough, not enough  
 too much, too little  
 too many, too few  
 nearly, roughly, close to, about the same as  
 just over, just under

### LENGTH

length, width, height, depth  
 long, short, tall  
 high, low  
 wide, narrow  
 deep, shallow  
 thick, thin  
 longer, shorter, taller, higher... and so on  
 longest, shortest, tallest, highest... and so on  
 far, near, close  
 metre  
 ruler, metre stick

### MASS

weigh, weighs, balances  
 heavy/light, heavier/lighter, heaviest/lightest  
 balance, scales, weight

### CAPACITY

full  
 half full  
 empty  
 holds  
 container

# YEAR 1

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## TIME

time

*days of the week:* Monday, Tuesday...

*seasons:* spring, summer, autumn, winter

day, week, month, year

weekend, birthday, holiday

morning, afternoon, evening

night, midnight

bedtime, dinnertime, playtime

today, yesterday, tomorrow

before, after

next, last

now, soon, early, late

quick, quicker, quickest, quickly

fast, faster, fastest

slow, slower, slowest, slowly

old, older, oldest

new, newer, newest

takes longer, takes less time

hour, o'clock, half past

clock, watch, hands

how long ago?

how long will it be to...?

how long will it take to...?

how often?

always, never, often, sometimes, usually

once, twice

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## SHAPE AND SPACE

shape, pattern

flat

curved, straight

round

hollow, solid

corner

point, pointed

face, side, edge, end

sort

make, build, draw

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## 3D SHAPES

cube

cuboid

pyramid

sphere

cone

cylinder

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## 2D SHAPES

circle

triangle

square

rectangle

star

## PATTERNS AND SYMMETRY

size

bigger, larger, smaller

symmetrical

pattern

repeating pattern

match

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## POSITION, DIRECTION AND MOVEMENT

position

over, under, underneath

above, below

top, bottom, side

on, in

outside, inside

around

in front, behind

front, back

before, after

beside, next to

opposite

apart

between

middle, edge

centre

corner

direction

journey

left, right

up, down

forwards, backwards, sideways

across

close, far, near

along

through

to, from, towards, away from

movement

slide

roll

turn, whole turn, half turn

stretch, bend

## Instructions

listen  
join in  
say

think  
imagine  
remember

start from  
start with  
start at

look at  
point to  
show me

put, place  
fit  
arrange  
rearrange  
change, change over  
split  
separate

carry on, continue  
repeat  
what comes next?

find  
choose  
collect

use  
make  
build

tell me  
describe  
pick out  
talk about  
explain  
show me

read  
write  
record  
trace  
copy  
complete  
finish, end

fill in  
shade  
colour

tick, cross  
draw  
draw a line between  
join (up)  
ring  
arrow

cost  
count  
work out  
answer  
check

## General

same number/s  
different number/s  
missing number/s  
number facts

number line, number track  
number square  
number cards  
abacus  
counters, cubes, blocks, rods  
die, dice  
dominoes  
pegs, peg board

same way, different way  
best way, another way  
in order, in a different order

not  
all, every, each

## Numbers and the number system

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### COUNTING, PROPERTIES OF NUMBERS AND NUMBER SEQUENCES

number  
zero, one, two, three... to twenty and beyond  
zero, ten, twenty... one hundred  
zero, one hundred, **two hundred... one thousand**  
none  
how many...?  
count, count (up) to  
count on (from, to)  
count back (from, to)  
count in ones, twos, **threes, fours, fives...**  
count in tens  
more, less, many, few  
**tally**  
odd, even  
every other  
how many times?  
**multiple of**  
**sequence**  
**continue**  
**predict**  
pattern, pair, **rule**

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### PLACE VALUE AND ORDERING

units, ones  
tens, **hundreds**  
digit  
**one-, two- or three-digit number**  
'teens' number  
**place, place value**  
**stands for, represents**  
**exchange**  
the same number as, as many as  
equal to  
*Of **two** objects/amounts:*  
greater, more, larger, bigger  
less, fewer, smaller  
*Of **three** or more objects/amounts:*  
greatest, most, biggest, largest  
least, fewest, smallest  
one more, ten more  
one less, ten less  
compare  
order  
size  
first, second, third... tenth... twentieth  
**twenty-first, twenty-second...**  
last, last but one  
before, after  
next  
between, half-way between  
above, below

### ESTIMATING

guess how many, estimate  
nearly, roughly, close to  
about the same as  
just over, just under  
**exact, exactly**  
too many, too few, enough, not enough  
**round, nearest, round to the nearest ten**

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### FRACTIONS

part, equal parts  
fraction  
**one whole**  
**one half, two halves**  
**one quarter, two... three... four quarters**

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## Calculations

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### ADDITION AND SUBTRACTION

+, add, **addition**, more, plus  
make, sum, total  
altogether  
score  
double, near double  
one more, two more... ten more... **one hundred more**  
how many more to make...?  
how many more is... than...?  
how much more is...?  
-, subtract, **subtraction**, take (away), minus  
leave, how many are left/left over?  
one less, two less... ten less... **one hundred less**  
how many fewer is... than...?  
how much less is...?  
difference between  
half, halve  
=, equals, sign, is the same as  
**tens boundary**

---

### MULTIPLICATION AND DIVISION

lots of, groups of  
×, times, multiply, multiplied by  
multiple of  
**once, twice, three times... ten times...**  
times as (big, long, wide... and so on)  
repeated addition  
array  
row, column  
double, halve  
share, share equally  
**one each, two each, three each...**  
group in pairs, threes... tens  
equal groups of  
÷, divide, divided by, divided into  
left, left over



## Solving problems

### MAKING DECISIONS AND REASONING

pattern, puzzle  
 calculate, calculation  
 mental calculation  
 jotting  
 answer  
 right, correct, wrong  
 what could we try next?  
 how did you work it out?  
 number sentence  
 sign, operation, symbol

### MONEY

money  
 coin  
 penny, pence, pound (£)  
 price, cost  
 buy, bought, sell, sold  
 spend, spent  
 pay  
 change  
 dear, costs more  
 cheap, costs less, cheaper  
 how much...? how many...?  
 total

## Organising and using data

count, tally, sort, vote  
 graph, block graph, pictogram  
 represent  
 group, set  
 same, different  
 list, table  
 label, title  
 most popular, most common  
 least popular, least common

## Measures, shape and space

### MEASURES (GENERAL)

measure  
 size  
 compare  
 measuring scale  
 guess, estimate  
 enough, not enough  
 too much, too little  
 too many, too few  
 nearly, roughly, about, close to, about the same as  
 just over, just under

### LENGTH

length, width, height, depth  
 long, short, tall, high, low  
 wide, narrow, deep, shallow, thick, thin  
 longer, shorter, taller, higher... and so on  
 longest, shortest, tallest, highest... and so on  
 far, further, furthest, near, close  
 metre (m), centimetre (cm)  
 ruler, metre stick, tape measure

### MASS

weigh, weighs, balances  
 heavy/light, heavier/lighter, heaviest/lightest  
 kilogram (kg), half-kilogram, gram (g)  
 balance, scales, weight

### CAPACITY

capacity  
 full, half full  
 empty  
 holds, contains  
 litre (l), half-litre, millilitre (ml)  
 container

### TIME

time  
 days of the week: Monday, Tuesday...  
 months of the year: January, February...  
 seasons: spring, summer, autumn, winter  
 day, week, fortnight, month, year  
 weekend, birthday, holiday  
 morning, afternoon, evening, night, midnight  
 bedtime, dinnertime, playtime  
 today, yesterday, tomorrow  
 before, after  
 next, last  
 now, soon, early, late  
 quick, quicker, quickest, quickly  
 fast, faster, fastest  
 slow, slower, slowest, slowly  
 old, older, oldest  
 new, newer, newest  
 takes longer, takes less time  
 how long ago? how long will it be to...?  
 how long will it take to...?  
 hour, minute, second  
 o'clock, half past, quarter to, quarter past  
 clock, watch, hands  
 digital/analogue clock/watch, timer  
 how often?  
 always, never, often, sometimes, usually  
 once, twice

# YEAR 2

---

## SHAPE AND SPACE

shape, pattern  
flat, curved, straight  
round  
hollow, solid  
corner  
point, pointed  
face, side, edge, end  
sort  
make, build, draw  
surface

---

## 3D SHAPES

cube  
cuboid  
pyramid  
sphere  
cone  
cylinder

---

## 2D SHAPES

circle, circular  
triangle, triangular  
square  
rectangle, rectangular  
star  
pentagon  
hexagon  
octagon

---

## PATTERNS AND SYMMETRY

size  
bigger, larger, smaller  
symmetrical  
line of symmetry  
fold  
match  
mirror line, reflection  
pattern  
repeating pattern

## POSITION, DIRECTION AND MOVEMENT

position  
over, under, underneath  
above, below  
top, bottom, side  
on, in  
outside, inside  
around  
in front, behind  
front, back  
before, after  
beside, next to  
opposite  
apart  
between  
middle, edge  
centre  
corner  
direction  
journey, route  
left, right  
up, down  
higher, lower  
forwards, backwards, sideways  
across  
close, far, near  
along  
through  
to, from, towards, away from  
clockwise, anti-clockwise  
movement  
slide  
roll  
whole turn, half turn, quarter turn  
right angle  
straight line  
stretch, bend

## Instructions

listen  
join in  
say  
recite

think  
imagine  
remember

start from  
start with  
start at

look at  
point to  
show me

put, place  
fit  
arrange, rearrange  
change, change over  
split  
separate

carry on, continue  
repeat  
what comes next?

predict  
describe the pattern  
describe the rule

find, find all, find different  
investigate

choose  
decide  
collect

use  
make  
build

tell me  
describe  
name  
pick out  
discuss  
talk about  
explain  
explain your method  
explain how you got your answer  
give an example of...  
show how you...

read  
write  
record  
write in figures  
present  
represent  
trace  
copy  
complete  
finish, end

fill in  
shade, colour  
label

tick, cross  
draw  
draw a line between  
join (up)  
ring  
arrow

cost, count, tally

calculate  
work out  
solve  
answer  
check

## General

same, different  
missing number/s  
number facts  
number pairs  
number bonds

number line, number track  
number square, hundred square  
number cards  
number grid  
abacus  
counters, cubes, blocks, rods  
die, dice  
dominoes  
pegs, peg board  
geo-strips

same way, different way  
best way, another way  
in order, in a different order

not  
all, every, each

## Numbers and the number system

---

### COUNTING, PROPERTIES OF NUMBERS AND NUMBER SEQUENCES

number  
zero, one, two, three... to twenty and beyond  
zero, ten, twenty... one hundred  
zero, one hundred, two hundred... one thousand  
none  
how many...?  
count, count (up) to  
count on (from, to)  
count back (from, to)  
count in ones, twos, threes, fours, fives...  
count in tens, **hundreds**  
more, less, many, few  
tally  
odd, even  
every other  
how many times?  
multiple of  
sequence  
continue  
predict  
pattern, pair, rule  
**relationship**

---

### PLACE VALUE AND ORDERING

units, ones  
tens, hundreds  
digit  
one-, two- or three-digit number  
'teens' number  
place, place value  
stands for, represents  
exchange  
the same number as, as many as  
equal to  
*Of **two** objects/amounts:*  
greater, more, larger, bigger  
less, fewer, smaller  
*Of **three** or more objects/amounts:*  
greatest, most, biggest, largest  
least, fewest, smallest  
one more, ten more, **one hundred more**  
one less, ten less, **one hundred less**  
compare  
order  
size  
first, second, third... tenth... twentieth  
twenty-first, twenty-second...  
last, last but one  
before, after  
next  
between, half-way between  
above, below

### ESTIMATING

guess how many, estimate  
nearly, roughly, close to  
**approximate, approximately**  
about the same as  
just over, just under  
exact, exactly  
too many, too few, enough, not enough  
round (**up or down**)  
nearest, round to the nearest ten

---

### FRACTIONS

part, equal parts  
fraction  
one whole  
one half, two halves  
one quarter, two... three... four quarters  
**one third, two thirds, three thirds**  
**one tenth**

---

## Calculations

---

### ADDITION AND SUBTRACTION

+, add, addition, more, plus  
make, sum, total  
altogether  
score  
double, near double  
one more, two more... ten more... one hundred more  
how many more to make...?  
how many more is... than...?  
how much more is...?  
-, subtract, subtraction, take (away), minus  
leave, how many are left/left over?  
one less, two less... ten less... one hundred less  
how many fewer is... than...?  
how much less is...?  
difference between  
half, halve  
=, equals, sign, is the same as  
tens boundary, **hundreds boundary**

---

### MULTIPLICATION AND DIVISION

lots of, groups of  
×, times, multiply, **multiplication**, multiplied by  
multiple of, **product**  
once, twice, three times... ten times...  
times as (big, long, wide... and so on)  
repeated addition  
array  
row, column  
double, halve  
share, share equally  
one each, two each, three each...

group in pairs, threes... tens  
 equal groups of  
 ÷, divide, **division**, divided by, divided into  
 left, left over, **remainder**

## Solving problems

### MAKING DECISIONS AND REASONING

pattern, puzzle  
 calculate, calculation  
 mental calculation  
**method**  
 jotting  
 answer  
 right, correct, wrong  
 what could we try next?  
 how did you work it out?  
 number sentence  
 sign, operation, symbol, **equation**

### MONEY

money  
 coin, **note**  
 penny, pence, pound (£)  
 price, cost  
 buy, bought, sell, sold  
 spend, spent  
 pay  
 change  
 dear, costs more, **more/most expensive**  
 cheap, costs less, cheaper, **less/least expensive**  
 how much...? how many...?  
 total, **amount**  
**value, worth**

## Handling data

count, tally, sort, vote  
 graph, block graph, pictogram  
 represent  
 group, set  
 list, **chart, bar chart**  
 table, **frequency table**  
**Carroll diagram, Venn diagram**  
 label, title, **axis, axes**  
**diagram**  
 most popular, most common  
 least popular, least common

## Measures, shape and space

### MEASURES (GENERAL)

measure  
 size  
 compare  
 measuring scale, **division**  
 guess, estimate  
 enough, not enough  
 too much, too little  
 too many, too few  
 nearly, roughly, about, close to,  
 about the same as, **approximately**  
 just over, just under

### LENGTH

length, width, height, depth  
 long, short, tall, high, low  
 wide, narrow, deep, shallow, thick, thin  
 longer, shorter, taller, higher... and so on  
 longest, shortest, tallest, highest... and so on  
 far, further, furthest, near, close  
**distance apart/between, distance to... from...**  
**kilometre (km), metre (m), centimetre (cm)**  
**mile**  
 ruler, metre stick, tape measure

### MASS

weigh, weighs, balances  
 heavy/light, heavier/lighter, heaviest/lightest  
 kilogram (*kg*), half-kilogram, gram (*g*)  
 balance, scales, weight

### CAPACITY

capacity  
 full, half full  
 empty  
 holds, contains  
 litre (*l*), half-litre, millilitre (*ml*)  
 container

### TIME

time  
*days of the week:* Monday, Tuesday...  
*months of the year:* January, February...  
*seasons:* spring, summer, autumn, winter  
 day, week, fortnight, month, year, **century**  
 weekend, birthday, holiday  
**calendar, date**  
 morning, afternoon, evening, night, midnight  
**am, pm**  
 bedtime, dinnertime, playtime  
 today, yesterday, tomorrow

# YEAR 3

---

before, after  
next, last  
now, soon, early, late, **earliest, latest**  
quick, quicker, quickest, quickly  
fast, faster, fastest  
slow, slower, slowest, slowly  
old, older, oldest  
new, newer, newest  
takes longer, takes less time  
how long ago? how long will it be to...?  
how long will it take to...?  
hour, minute, second  
o'clock, half past, quarter to, quarter past  
clock, watch, hands  
digital/analogue clock/watch, timer  
how often?  
always, never, often, sometimes, usually  
once, twice

---

## SHAPE AND SPACE

shape, pattern  
flat, curved, straight  
round  
hollow, solid  
corner  
point, pointed  
face, side, edge, end  
sort  
make, build, draw  
surface  
**right-angled**  
**vertex, vertices**  
**layer, diagram**

---

## 3D SHAPES

cube  
cuboid  
pyramid  
sphere, **hemi-sphere**  
cone  
cylinder  
**prism**

---

## 2D SHAPES

circle, circular, **semi-circle**  
triangle, triangular  
square  
rectangle, rectangular  
star  
pentagon, **pentagonal**  
hexagon, **hexagonal**  
octagon, **octagonal**  
**quadrilateral**

## PATTERNS AND SYMMETRY

size  
bigger, larger, smaller  
symmetrical  
line of symmetry  
fold  
match  
mirror line, reflection  
pattern  
repeating pattern

---

## POSITION, DIRECTION AND MOVEMENT

position  
over, under, underneath  
above, below  
top, bottom, side  
on, in  
outside, inside  
around  
in front, behind  
front, back  
before, after  
beside, next to  
opposite  
apart  
between  
middle, edge  
centre  
corner  
direction  
journey, route, **map, plan**  
left, right  
up, down  
higher, lower  
forwards, backwards, sideways  
across  
close, far, near  
along  
through  
to, from, towards, away from  
**ascend, descend**  
**grid**  
**row, column**  
clockwise, anti-clockwise  
**compass point**  
**north, south, east, west (N, S, E, W)**  
**horizontal, vertical**  
**diagonal**  
movement  
slide  
roll  
whole turn, half turn, quarter turn  
**angle, ...is a greater/smaller angle than**  
right angle  
straight line  
stretch, bend

## Instructions

listen  
join in  
say  
recite

think  
imagine  
remember

start from  
start with  
start at

look at  
point to  
show me

put, place  
fit  
arrange, rearrange  
change, change over  
split  
separate

carry on, continue  
repeat  
what comes next?  
predict  
describe the pattern  
describe the rule

find, find all, find different  
investigate

choose  
decide  
collect

use  
make  
build

tell me  
describe  
name  
pick out  
discuss  
talk about  
explain  
explain your method  
explain how you got your answer  
give an example of...  
show how you...  
**show your working**

read  
write  
record  
write in figures

present  
represent  
**interpret**  
trace  
copy  
complete  
finish, end

fill in  
shade, colour  
label

tick, cross  
draw, **sketch**  
draw a line between  
join (up)  
ring  
arrow

cost, count, tally

calculate  
work out  
solve  
**investigate**  
**question**  
answer  
check

## General

same, different  
missing number/s  
number facts, number pairs, number bonds  
**greatest value, least value**

number line, number track  
number square, hundred square  
number cards  
number grid  
abacus  
counters, cubes, blocks, rods  
die, dice  
dominoes  
pegs, peg board  
geo-strips

same way, different way  
best way, another way  
in order, in a different order

not  
all, every, each

## Numbers and the number system

---

### PLACE VALUE, ORDERING AND ROUNDING

units, ones  
tens, hundreds, **thousands**  
**ten thousand, hundred thousand, million**  
digit, one-, two-, three- or **four-digit number**  
**numeral**  
'teens' number  
place, place value  
stands for, represents  
exchange  
the same number as, as many as  
equal to  
*Of **two** objects/amounts:*  
>, greater than, more than, larger than, bigger than  
<, less than, fewer than, smaller than  
*Of **three** or more objects/amounts:*  
greatest, most, largest, biggest  
least, fewest, smallest  
one... ten... one hundred... **one thousand** more/less  
compare, order, size  
first... tenth... twentieth  
last, last but one  
before, after  
next  
between, half-way between  
guess how many, estimate  
nearly, roughly, close to, about the same as  
approximate, approximately  
just over, just under  
exact, exactly  
too many, too few, enough, not enough  
round (up or down), nearest  
round to the nearest ten  
**round to the nearest hundred**  
**integer, positive, negative**  
**above/below zero, minus**

### PROPERTIES OF NUMBERS AND NUMBER

#### SEQUENCES

number, count, how many...?  
odd, even  
every other  
how many times?  
multiple of  
digit  
**next, consecutive**  
sequence  
continue  
predict  
pattern, pair, rule  
relationship  
**sort, classify, property**

### FRACTIONS AND DECIMALS

part, equal parts  
fraction  
one whole  
half, quarter, **eighth**  
third, **sixth**  
**fifth, tenth, twentieth**  
proportion, in every, for every  
**decimal, decimal fraction**  
**decimal point, decimal place**

## Calculations

---

### ADDITION AND SUBTRACTION

add, addition, more, plus, **increase**  
sum, total, altogether  
score  
double, near double  
how many more to make...?  
subtract, subtraction, take (away), minus, **decrease**  
leave, how many are left/left over?  
difference between  
half, halve  
how many more/fewer is... than...?  
how much more/less is...?  
equals, sign, is the same as  
tens boundary, hundreds boundary  
**inverse**

### MULTIPLICATION AND DIVISION

lots of, groups of  
times, multiply, multiplication, multiplied by  
multiple of, product  
once, twice, three times... ten times...  
times as (big, long, wide... and so on)  
repeated addition  
array  
row, column  
double, halve  
share, share equally  
one each, two each, three each...  
group in pairs, threes... tens  
equal groups of  
divide, division, divided by, divided into  
remainder  
**factor, quotient, divisible by**  
**inverse**



## Solving problems

### MAKING DECISIONS AND REASONING

pattern, puzzle  
 calculate, calculation  
 mental calculation  
 method  
 jotting  
 answer  
 right, correct, wrong  
 what could we try next?  
 how did you work it out?  
 number sentence  
 sign, operation, symbol, equation

### MONEY

money  
 coin, note  
 penny, pence, pound (£)  
 price, cost  
 buy, bought, sell, sold  
 spend, spent  
 pay  
 change  
 dear, costs more, more/most expensive  
 cheap, costs less, cheaper, less/least expensive  
 how much...? how many...?  
 total, amount  
 value, worth

## Handling data

count, tally, sort, vote  
 survey, questionnaire, data  
 graph, block graph, pictogram  
 represent  
 group, set  
 list, chart, bar chart, tally chart  
 table, frequency table  
 Carroll diagram, Venn diagram  
 label, title, axis, axes  
 diagram  
 most popular, most common  
 least popular, least common

## Measures, shape and space

### MEASURES (GENERAL)

measure, measurement  
 size  
 compare  
 unit, standard unit  
 metric unit, imperial unit

measuring scale, division  
 guess, estimate  
 enough, not enough  
 too much, too little  
 too many, too few  
 nearly, roughly, about, close to  
 about the same as, approximately  
 just over, just under

### LENGTH

length, width, height, depth, **breadth**  
 long, short, tall, high, low  
 wide, narrow, deep, shallow, thick, thin  
 longer, shorter, taller, higher... and so on  
 longest, shortest, tallest, highest... and so on  
 far, further, furthest, near, close  
 distance apart/between, distance to... from...  
**edge, perimeter**  
 kilometre (*km*), metre (*m*)  
 centimetre (*cm*), millimetre (*mm*)  
 mile  
 ruler, metre stick, tape measure

### MASS

**mass**: big, bigger, small, smaller, balances  
*weight*: heavy/light, heavier/lighter, heaviest/lightest  
 weigh, weighs  
 kilogram (*kg*), half-kilogram, gram (*g*)  
 balance, scales

### CAPACITY

capacity  
 full, half full  
 empty  
 holds, contains  
 litre (*l*), half-litre, millilitre (*ml*)  
**pint**  
 container, **measuring cylinder**

### AREA

**area**, covers, surface  
 square centimetre (*cm<sup>2</sup>*)

### TIME

time  
*days of the week*: Monday, Tuesday...  
*months of the year*: January, February...  
*seasons*: spring, summer, autumn, winter  
 day, week, fortnight, month  
 year, **leap year**, century, **millennium**  
 weekend, birthday, holiday  
 calendar, date, **date of birth**  
 morning, afternoon, evening, night

# YEAR 4

---

am, pm, **noon**, midnight  
today, yesterday, tomorrow  
before, after, next, last  
now, soon, early, late, earliest, latest  
quick, quicker, quickest, quickly  
fast, faster, fastest, slow, slower, slowest, slowly  
old, older, oldest, new, newer, newest  
takes longer, takes less time  
how long ago? how long will it be to...?  
how long will it take to...?  
**timetable, arrive, depart**  
hour, minute, second  
o'clock, half past, quarter to, quarter past  
clock, watch, hands  
digital/analogue clock/watch, timer  
how often?  
always, never, often, sometimes, usually

---

## SHAPE AND SPACE

shape, pattern  
flat, **line**  
curved, straight  
round  
hollow, solid  
corner  
point, pointed  
face, side, edge, end  
sort  
make, build, **construct**, draw, **sketch**  
centre, **radius, diameter**  
**net**  
surface  
**angle, right-angled**  
**base, square-based**  
vertex, vertices  
layer, diagram  
**regular, irregular**  
**concave, convex**  
open, closed

---

## 3D SHAPES

**3D, three-dimensional**  
cube  
cuboid  
pyramid  
sphere, hemi-sphere, **spherical**  
cone  
cylinder, **cylindrical**  
prism  
**tetrahedron, polyhedron**

---

## 2D SHAPES

**2D, two-dimensional**  
circle, circular, semi-circle  
triangle, triangular  
**equilateral triangle, isosceles triangle**

---

square  
rectangle, rectangular, **oblong**  
pentagon, pentagonal  
hexagon, hexagonal  
**heptagon**  
octagon, octagonal  
**polygon**  
quadrilateral

---

## PATTERNS AND SYMMETRY

size  
bigger, larger, smaller  
symmetrical  
line of symmetry, **line symmetry**  
fold  
match  
mirror line, reflection, **reflect**  
pattern, repeating pattern, **translation**

---

## POSITION, DIRECTION AND MOVEMENT

position  
over, under, underneath  
above, below, top, bottom, side  
on, in, outside, inside, around  
in front, behind, front, back  
before, after, beside, next to  
opposite, apart  
between, middle, edge, centre  
corner  
direction  
journey, route, map, plan  
left, right  
up, down, higher, lower  
forwards, backwards, sideways, across  
close, far, near  
along, through, to, from, towards, away from  
ascend, descend  
grid  
row, column  
**origin, coordinates**  
clockwise, anti-clockwise  
compass point, north, south, east, west (N, S, E, W)  
**north-east, north-west, south-east, south-west**  
**(NE, NW, SE, SW)**  
horizontal, vertical, diagonal  
movement  
slide, roll  
whole turn, half turn, quarter turn, **rotate**  
angle, ...is a greater/smaller angle than  
right angle  
**degree**  
straight line  
stretch, bend  
**ruler, set square**  
**angle measurer, compasses**

---

## Instructions

listen, join in, say, recite  
 think, imagine, remember  
 start from, start with, start at  
 look at, point to, show me

put, place  
 arrange, rearrange  
 change, change over  
 split, separate

carry on, continue, repeat  
 what comes next? predict  
 describe the pattern, describe the rule

find, find all, find different  
 investigate

choose, decide  
 collect

use, make, build, **construct**

tell me, describe, name, pick out  
 discuss, talk about  
 explain  
 explain your method  
 explain how you got your answer  
 give an example of...  
 show how you...  
 show your working  
**justify**  
**make a statement**

read, write, record  
 write in figures  
 present, represent  
 interpret  
 trace, copy  
 complete, finish, end

fill in, shade, colour  
 label, **plot**

tick, cross  
 draw, sketch  
 draw a line between, join (up), ring, arrow

cost, count, tally

calculate, work out, solve  
 investigate, question  
 answer  
 check

## General

same, different  
 missing number/s  
 number facts, number pairs, number bonds  
 greatest value, least value

number line, number track  
 number square, hundred square  
 number cards, number grid  
 abacus  
 counters, cubes, blocks, rods  
 die, dice  
 dominoes  
 pegs, peg board, **pin board**  
 geo-strips

same way, different way  
 best way, another way  
 in order, in a different order

not  
 all, every, each

## Numbers and the number system

### PLACE VALUE, ORDERING AND ROUNDING

units, ones  
tens, hundreds, thousands  
ten thousand, hundred thousand, million  
digit, one-, two-, three- or four-digit number  
numeral  
'teens' number  
place, place value  
stands for, represents  
exchange  
the same number as, as many as  
equal to  
*Of two objects/amounts:*  
>, greater than, more than, larger than, bigger than  
<, less than, fewer than, smaller than  
≥, greater than or equal to  
≤, less than or equal to  
*Of three or more objects/amounts:*  
greatest, most, largest, biggest  
least, fewest, smallest  
one... ten... one hundred... one thousand more/less  
compare, order, size  
ascending/descending order  
first... tenth... twentieth  
last, last but one  
before, after, next  
between, half-way between  
guess how many, estimate  
nearly, roughly, close to, about the same as  
approximate, approximately  
≈, is approximately equal to  
just over, just under  
exact, exactly  
too many, too few, enough, not enough  
round (up or down), nearest  
round to the nearest ten/hundred  
round to the nearest thousand  
integer  
positive, negative  
above/below zero, minus

### PROPERTIES OF NUMBERS AND NUMBER SEQUENCES

number, count, how many...?  
odd, even  
every other  
how many times?  
multiple of  
digit  
next, consecutive  
sequence  
continue  
predict

pattern, pair, rule  
relationship  
sort, classify, property  
formula  
divisible (by), divisibility, factor  
square number  
one squared, two squared... ( $1^2$ ,  $2^2$ ...)

### FRACTIONS, DECIMALS, PERCENTAGES, RATIO AND PROPORTION

part, equal parts  
fraction, proper/improper fraction  
mixed number  
numerator, denominator  
equivalent, reduced to, cancel  
one whole  
half, quarter, eighth  
third, sixth, ninth, twelfth  
fifth, tenth, twentieth, hundredth  
proportion, ratio  
in every, for every  
to every, as many as  
decimal, decimal fraction  
decimal point, decimal place  
percentage, per cent, %

## Calculations

### ADDITION AND SUBTRACTION

add, addition, more, plus, increase  
sum, total, altogether  
score  
double, near double  
how many more to make...?  
subtract, subtraction, take (away), minus, decrease  
leave, how many are left/left over?  
difference between  
half, halve  
how many more/fewer is... than...?  
how much more/less is...?  
equals, sign, is the same as  
tens boundary, hundreds boundary  
units boundary, tenths boundary  
inverse

### MULTIPLICATION AND DIVISION

lots of, groups of  
times, multiply, multiplication, multiplied by  
multiple of, product  
once, twice, three times... ten times...  
times as (big, long, wide... and so on)  
repeated addition  
array  
row, column  
double, halve  
share, share equally

one each, two each, three each...  
 group in pairs, threes... tens  
 equal groups of  
 divide, division, divided by, divided into  
 remainder  
 factor, quotient, divisible by  
 inverse

### USING A CALCULATOR

calculator  
 display, key, enter, clear  
 constant

## Solving problems

### MAKING DECISIONS AND REASONING

pattern, puzzle  
 calculate, calculation  
 mental calculation  
 method, strategy  
 jotting  
 answer  
 right, correct, wrong  
 what could we try next?  
 how did you work it out?  
 number sentence  
 sign, operation, symbol, equation

### MONEY

money  
 coin, note  
 penny, pence, pound (£)  
 price, cost  
 buy, bought, sell, sold  
 spend, spent  
 pay  
 change  
 dear, costs more, more/most expensive  
 cheap, costs less, cheaper, less/least expensive  
 how much...? how many...?  
 total, amount, value, worth  
 discount  
 currency

## Handling data

count, tally, sort, vote  
 survey, questionnaire  
 data, database  
 graph, block graph, line graph  
 pictogram,  
 represent  
 group, set  
 list, chart, bar chart, bar line chart  
 tally chart

table, frequency table  
 Carroll diagram, Venn diagram  
 label, title, axis, axes  
 diagram  
 most popular, most common  
 least popular, least common  
 mode, range  
 maximum/minimum value  
 classify, outcome

### PROBABILITY

fair, unfair  
 likely, unlikely, likelihood  
 certain, uncertain  
 probable, possible, impossible  
 chance, good chance  
 poor chance, no chance  
 risk, doubt

## Measures, shape and space

### MEASURES (GENERAL)

measure, measurement  
 size  
 compare  
 unit, standard unit  
 metric unit, imperial unit  
 measuring scale, division  
 guess, estimate  
 enough, not enough  
 too much, too little  
 too many, too few  
 nearly, roughly, about, close to  
 about the same as, approximately  
 just over, just under

### LENGTH

length, width, height, depth, breadth  
 long, short, tall, high, low  
 wide, narrow, deep, shallow, thick, thin  
 longer, shorter, taller, higher... and so on  
 longest, shortest, tallest, highest... and so on  
 far, further, furthest, near, close  
 distance apart/between, distance to... from...  
 edge, perimeter  
 kilometre (km), metre (m)  
 centimetre (cm), millimetre (mm)  
 mile  
 ruler, metre stick, tape measure

### MASS

mass: big, bigger, small, smaller, balances  
 weight: heavy/light, heavier/lighter, heaviest/lightest  
 weigh, weighs  
 kilogram (kg), half-kilogram, gram (g)  
 balance, scales

# YEAR 5

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## CAPACITY

capacity  
full, half full  
empty  
holds, contains  
litre (*l*), half-litre, millilitre (*ml*)  
pint, **gallon**  
container, measuring cylinder

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## AREA

area, covers, surface  
square centimetre (*cm<sup>2</sup>*), **square metre (*m<sup>2</sup>*)**  
**square millimetre (*mm<sup>2</sup>*)**

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## TIME

time  
*days of the week*: Monday, Tuesday...  
*months of the year*: January, February...  
*seasons*: spring, summer, autumn, winter  
day, week, fortnight, month  
year, leap year, century, millennium  
weekend, birthday, holiday  
calendar, date, date of birth  
morning, afternoon, evening, night  
am, pm, noon, midnight  
today, yesterday, tomorrow  
before, after, next, last  
now, soon, early, late, earliest, latest  
quick, quicker, quickest, quickly  
fast, faster, fastest, slow, slower, slowest, slowly  
old, older, oldest, new, newer, newest  
takes longer, takes less time  
how long ago? how long will it be to...?  
how long will it take to...?  
timetable, arrive, depart  
hour, minute, second  
o'clock, half past, quarter to, quarter past  
clock, watch, hands  
digital/analogue clock/watch, timer  
**24-hour clock**, **12-hour clock**  
how often?  
always, never, often, sometimes, usually

## SHAPE AND SPACE

shape, pattern  
flat, line  
curved, straight  
round  
hollow, solid  
corner  
point, pointed  
face, side, edge, end  
sort  
make, build, construct, draw, sketch  
centre, radius, diameter  
net  
surface  
angle, right-angled  
**congruent**  
base, square-based  
vertex, vertices  
layer, diagram  
regular, irregular  
concave, convex  
open, closed

---

## 3D SHAPES

3D, three-dimensional  
cube, cuboid  
pyramid  
sphere, hemi-sphere, spherical  
cone  
cylinder, cylindrical  
prism  
tetrahedron, polyhedron, **octahedron**

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## 2D SHAPES

2D, two-dimensional  
circle, circular, semi-circle  
triangle, triangular  
equilateral triangle, isosceles triangle, **scalene triangle**  
square  
rectangle, rectangular, oblong  
pentagon, pentagonal  
hexagon, hexagonal  
heptagon  
octagon, octagonal  
polygon  
quadrilateral

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## PATTERNS AND SYMMETRY

size  
bigger, larger, smaller  
symmetrical  
line of symmetry, **axis of symmetry**  
line symmetry, **reflective symmetry**  
fold  
match  
mirror line, reflection, reflect  
pattern, repeating pattern, translation

**POSITION, DIRECTION AND MOVEMENT**

position  
 over, under, underneath  
 above, below, top, bottom, side  
 on, in, outside, inside, around  
 in front, behind, front, back  
 before, after, beside, next to  
 opposite, apart  
 between, middle, edge, centre  
 corner  
 direction  
 journey, route, map, plan  
 left, right  
 up, down, higher, lower  
 forwards, backwards, sideways, across  
 close, far, near  
 along, through, to, from, towards, away from  
 ascend, descend  
 grid, row, column  
 origin, coordinates  
 clockwise, anti-clockwise  
 compass point, north, south, east, west (N, S, E, W)  
 north-east, north-west, south-east, south-west  
 (NE, NW, SE, SW)  
 horizontal, vertical, diagonal  
 parallel, perpendicular  
 x-axis, y-axis  
 quadrant  
 movement  
 slide, roll  
 whole turn, half turn, quarter turn  
 rotate, rotation  
 angle, ...is a greater/smaller angle than  
 right angle, acute, obtuse  
 degree  
 straight line  
 stretch, bend  
 ruler, set square  
 angle measurer, compasses, protractor

**Instructions**

listen, join in, say, recite  
 think, imagine, remember  
 start from, start with, start at  
 look at, point to, show me  
  
 put, place  
 arrange, rearrange  
 change, change over  
 split, separate  
  
 carry on, continue, repeat  
 what comes next? predict  
 describe the pattern, describe the rule  
  
 find, find all, find different  
 investigate

choose, decide  
 collect  
  
 use, make, build, construct, bisect  
  
 tell me, describe, name, pick out, identify  
 discuss, talk about  
 explain  
 explain your method/answer/reasoning  
 give an example of...  
 show how you...  
 show your working  
 justify  
 make a statement  
  
 read, write, record  
 write in figures  
 present, represent  
 interpret  
 trace, copy  
 complete, finish, end  
  
 fill in, shade, colour  
 label, plot  
  
 tick, cross  
 draw, sketch  
 draw a line between, join (up), ring, arrow  
  
 cost, count, tally  
  
 calculate, work out, solve, convert  
 investigate, question  
 answer  
 check

**General**

same, different  
 missing number/s  
 number facts, number pairs, number bonds  
 greatest value, least value  
  
 number line, number track  
 number square, hundred square  
 number cards, number grid  
 abacus  
 counters, cubes, blocks, rods  
 die, dice, spinner  
 dominoes  
 pegs, peg board, pin board  
 geo-strips  
  
 same way, different way  
 best way, another way  
 in order, in a different order  
  
 not  
 all, every, each



## Numbers and the number system

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### PLACE VALUE, ORDERING AND ROUNDING

units, ones  
tens, hundreds, thousands  
ten thousand, hundred thousand, million  
digit, one-, two-, three- or four-digit number  
numeral  
'teens' number  
place, place value  
stands for, represents  
exchange  
the same number as, as many as  
equal to  
*Of two objects/amounts:*  
>, greater than, more than, larger than, bigger than  
<, less than, fewer than, smaller than  
≥, greater than or equal to  
≤, less than or equal to  
*Of three or more objects/amounts:*  
greatest, most, largest, biggest  
least, fewest, smallest  
one... ten... one hundred... one thousand more/less  
compare, order, size  
ascending/descending order  
first... tenth... twentieth  
last, last but one  
before, after  
next  
between, half-way between  
guess how many, estimate  
nearly, roughly, close to, about the same as  
approximate, approximately  
≈, is approximately equal to  
just over, just under  
exact, exactly  
too many, too few, enough, not enough  
round (up or down), nearest  
round to the nearest ten/hundred/thousand  
integer, positive, negative  
above/below zero, minus

### PROPERTIES OF NUMBERS AND NUMBER SEQUENCES

number, count, how many...?  
odd, even  
every other  
how many times?  
multiple of  
digit  
next, consecutive  
sequence  
continue  
predict  
pattern, pair, rule

relationship  
sort, classify, property  
formula  
divisible (by), divisibility, factor, **factorise**  
square number  
one squared, two squared... ( $1^2$ ,  $2^2$ ...)  
**prime, prime factor**

---

### FRACTIONS, DECIMALS, PERCENTAGES, RATIO AND PROPORTION

part, equal parts  
fraction, proper/improper fraction  
mixed number  
numerator, denominator  
equivalent, reduced to, cancel  
one whole  
half, quarter, eighth  
third, sixth, ninth, twelfth  
fifth, tenth, twentieth  
hundredth, **thousandth**  
proportion, ratio  
in every, for every  
to every, as many as  
decimal, decimal fraction  
decimal point, decimal place  
percentage, per cent, %

## Calculations

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### ADDITION AND SUBTRACTION

add, addition, more, plus, increase  
sum, total, altogether  
score  
double, near double  
how many more to make...?  
subtract, subtraction, take (away), minus, decrease  
leave, how many are left/left over?  
difference between  
half, halve  
how many more/fewer is... than...?  
how much more/less is...?  
equals, sign, is the same as  
tens boundary, hundreds boundary  
units boundary, tenths boundary  
inverse

---

### MULTIPLICATION AND DIVISION

lots of, groups of  
times, multiply, multiplication, multiplied by  
multiple of, product  
once, twice, three times... ten times...  
times as (big, long, wide... and so on)  
repeated addition  
array, row, column  
double, halve



share, share equally  
 one each, two each, three each...  
 group in pairs, threes... tens  
 equal groups of  
 divide, division, divided by, divided into  
 remainder  
 factor, quotient, divisible by  
 inverse

### USING A CALCULATOR

calculator, display, key  
 enter, clear, **sign change**  
 constant, **recurring, memory, operation key**

## Solving problems

### MAKING DECISIONS AND REASONING

pattern, puzzle  
 calculate, calculation  
 mental calculation  
 method, strategy  
 jotting  
 answer  
 right, correct, wrong  
 what could we try next?  
 how did you work it out?  
 number sentence  
 sign, operation, symbol, equation

### MONEY

money  
 coin, note  
 penny, pence, pound (£)  
 price, cost  
 buy, bought, sell, sold  
 spend, spent  
 pay  
 change  
 dear, costs more, more/most expensive  
 cheap, costs less, cheaper, less/least expensive  
 how much...? how many...?  
 total, amount, value, worth  
 discount, **profit, loss**  
 currency

## Handling data

count, tally, sort, vote  
 survey, questionnaire  
 data, database  
 graph, block graph, line graph  
 pictogram,  
 represent  
 group, set

list, chart, bar chart, bar line chart  
 tally chart  
 table, frequency table  
 Carroll diagram, Venn diagram  
 label, title, axis, axes  
 diagram  
 most popular, most common  
 least popular, least common  
 mode, range, **mean, average, median**  
**statistics, distribution**  
 maximum/minimum value  
 classify, outcome

### PROBABILITY

fair, unfair  
 likely, unlikely, likelihood, **equally likely**  
 certain, uncertain  
 probable, possible, impossible  
 chance, good chance,  
 poor chance, no chance  
**equal chance, even chance, fifty-fifty chance**  
 risk, doubt  
**biased, random**

## Measures, shape and space

### MEASURES (GENERAL)

measure, measurement  
 size  
 compare  
 unit, standard unit  
 metric unit, imperial unit  
 measuring scale, division  
 guess, estimate  
 enough, not enough  
 too much, too little  
 too many, too few  
 nearly, roughly, about, close to  
 about the same as, approximately  
 just over, just under

### LENGTH

length, width, height, depth, breadth  
 long, short, tall, high, low  
 wide, narrow, deep, shallow, thick, thin  
 longer, shorter, taller, higher... and so on  
 longest, shortest, tallest, highest... and so on  
 far, further, furthest, near, close  
 distance apart/between, distance to... from...  
 edge, perimeter, **circumference**  
 kilometre (*km*), metre (*m*)  
 centimetre (*cm*), millimetre (*mm*)  
 mile, **yard, feet, foot, inches, inch**  
 ruler, metre stick, tape measure, compasses

# YEAR 6

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## MASS

*mass*: big, bigger, small, smaller, balances  
*weight*: heavy/light, heavier/lighter, heaviest/lightest  
weigh, weighs  
tonne, kilogram (*kg*), half-kilogram, gram (*g*)  
pound (*lb*), ounce (*oz*)  
balance, scales

---

## CAPACITY

capacity  
full, half full, empty  
holds, contains  
litre (*l*), half-litre, centilitre (*cl*), millilitre (*ml*)  
pint, gallon  
container, measuring cylinder

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## AREA

area, covers, surface  
square centimetre (*cm<sup>2</sup>*), square metre (*m<sup>2</sup>*)  
square millimetre (*mm<sup>2</sup>*)

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## TIME

time  
*days of the week*: Monday, Tuesday...  
*months of the year*: January, February...  
*seasons*: spring, summer, autumn, winter  
day, week, fortnight, month  
year, leap year, century, millennium  
weekend, birthday, holiday  
calendar, date, date of birth  
morning, afternoon, evening, night  
am, pm, noon, midnight  
today, yesterday, tomorrow  
before, after, next, last  
now, soon, early, late, earliest, latest  
quick, quicker, quickest, quickly  
fast, faster, fastest, slow, slower, slowest, slowly  
old, older, oldest, new, newer, newest  
takes longer, takes less time  
how long ago? how long will it be to...?  
how long will it take to...?  
timetable, arrive, depart  
hour, minute, second  
o'clock, half past, quarter to, quarter past  
clock, watch, hands  
digital/analogue clock/watch, timer  
24-hour clock, 12-hour clock  
Greenwich Mean Time, British Summer Time  
International Date Line  
how often?  
always, never, often, sometimes, usually

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## SHAPE AND SPACE

shape, pattern  
flat, line  
curved, straight  
round

hollow, solid  
corner  
point, pointed  
face, side, edge, end  
sort  
make, build, construct, draw, sketch  
centre, radius, diameter  
circumference, concentric, arc  
net  
surface  
angle, right-angled  
congruent  
intersecting, intersection  
plane  
base, square-based  
vertex, vertices  
layer, diagram  
regular, irregular  
concave, convex  
open, closed  
tangent

---

## 3D SHAPES

3D, three-dimensional  
cube, cuboid  
pyramid  
sphere, hemi-sphere, spherical  
cone  
cylinder, cylindrical  
prism  
tetrahedron, polyhedron, octahedron, dodecahedron

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## 2D SHAPES

2D, two-dimensional  
circle, circular, semi-circle  
triangle, triangular  
equilateral triangle, isosceles triangle, scalene triangle  
square, rhombus  
rectangle, rectangular, oblong  
pentagon, pentagonal  
hexagon, hexagonal  
heptagon  
octagon, octagonal  
polygon  
quadrilateral  
kite  
parallelogram, trapezium

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## PATTERNS AND SYMMETRY

size  
bigger, larger, smaller  
symmetrical  
line of symmetry, axis of symmetry  
line symmetry, reflective symmetry  
fold  
match  
mirror line, reflection, reflect  
pattern, repeating pattern, translation

---

**POSITION, DIRECTION AND MOVEMENT**

position  
 over, under, underneath  
 above, below, top, bottom, side  
 on, in, outside, inside, around  
 in front, behind, front, back  
 before, after, beside, next to  
 opposite, apart  
 between, middle, edge, centre  
 corner  
 direction  
 journey, route, map, plan  
 left, right  
 up, down, higher, lower  
 forwards, backwards, sideways, across  
 close, far, near  
 along, through, to, from, towards, away from  
 ascend, descend  
 grid, row, column  
 origin, coordinates  
 clockwise, anti-clockwise  
 compass point, north, south, east, west (N, S, E, W)  
 north-east, north-west, south-east, south-west  
 (NE, NW, SE, SW)  
 horizontal, vertical, diagonal  
 parallel, perpendicular  
 x-axis, y-axis  
 quadrant  
 movement  
 slide, roll  
 whole turn, half turn, quarter turn, rotate, rotation  
 angle, ...is a greater/smaller angle than  
 right angle, acute, obtuse, **reflex**  
 degree  
 straight line  
 stretch, bend  
 ruler, set square  
 angle measurer, compasses, protractor

**Instructions**

listen, join in, say, recite  
 think, imagine, remember  
 start from, start with, start at  
 look at, point to, show me  
  
 put, place  
 arrange, rearrange  
 change, change over  
**adjusting, adjust**  
 split, separate  
  
 carry on, continue, repeat  
 what comes next? predict  
 describe the pattern, describe the rule  
  
 find, find all, find different  
 investigate

choose, decide  
 collect  
  
 use, make, build, construct, bisect  
  
 tell me, **define**, describe, name, pick out, identify  
 discuss, talk about  
 explain  
 explain your method/answer/reasoning  
 give an example of...  
 show how you...  
 show your working  
 justify  
 make a statement  
  
 read, write, record  
 write in figures  
 present, represent  
 interpret  
 trace, copy  
 complete, finish, end  
  
 fill in, shade, colour  
 label, plot  
  
 tick, cross  
 draw, sketch  
 draw a line between, join (up), ring, arrow  
  
 cost, count, tally  
  
 calculate, work out, solve, convert  
  
 investigate, **interrogate (data)**, question, **prove**  
 answer  
 check

**General**

same, **identical**, different  
 missing number/s  
 number facts, number pairs, number bonds  
 greatest value, least value  
  
 number line, number track  
 number square, hundred square  
 number cards, number grid  
 abacus  
 counters, cubes, blocks, rods  
 die, dice, spinner  
 dominoes  
 pegs, peg board, pin board  
 geo-strips  
  
 same way, different way  
 best way, another way  
 in order, in a different order  
  
 not  
 all, every, each

## Mathematical dictionaries

Every classroom needs a mathematical dictionary, suited to the age of the children. This could either be a published version, or one which the children have made themselves. As well as being useful for children to look up the meanings of words, it will be on hand when the teacher needs to refer to a mathematical dictionary.