Vocabulary checklist

Year 7

This list contains the key words used in the Year 7 teaching programme and supplement of examples. Some words will be familiar to pupils in Year 7 from earlier work. For definitions of the words you will need to refer to a mathematical dictionary or to the National Curriculum glossary on the QCA website at www.qca.org.uk.

**Applying mathematics and solving problems**
- answer
- evidence
- explain
- explore
- investigate
- method
- problem
- reason, reasons
- results
- solution (of a problem)
- solve
- true, false

**Integers, powers and roots**
- classify
- common factor
- consecutive
- divisible, divisibility
- divisor
- factor
- factorise
- highest common factor (HCF)
- integer
- lowest common multiple (LCM)
- multiple
- negative (e.g. -6)
- plus, minus
- positive (e.g. +6)
- prime
- prime factor
- property
- sign
- square number, squared
- square root
- triangular number

**Numbers and the number system**

**Place value, ordering and rounding**
- approximate, approximately
- approximately equal to (=)
- between
- compare
- decimal number
- decimal place
- digit
- equals (=)
- greater than (>), less than (<)
- greatest value, least value
- most/least significant digit
- nearest
- order
- place value
- round
- tenth, hundredth, thousandth
- to one decimal place (to 1 d.p.)
- value
- zero place holder

**Fractions, decimals, percentages, ratio and proportion**
- cancel, cancellation
- convert
- decimal fraction
- equivalent, equivalence
- fraction
- lowest terms
- mixed number
- numerator, denominator
- percentage (%)
- proper/improper fraction
- proportion
- ratio, including notation 3 : 2
- simplest form
<table>
<thead>
<tr>
<th>Calculations</th>
<th>Algebra</th>
</tr>
</thead>
<tbody>
<tr>
<td>add, addition</td>
<td>Equations, formulae and identities</td>
</tr>
<tr>
<td>amount</td>
<td>algebra</td>
</tr>
<tr>
<td>brackets</td>
<td>brackets</td>
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<tr>
<td>calculate, calculation</td>
<td>commutative</td>
</tr>
<tr>
<td>calculator: clear, display, enter, key, memory, change (money)</td>
<td>equals (=)</td>
</tr>
<tr>
<td>commutative</td>
<td>equation</td>
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<tr>
<td>complements (in 10, 100)</td>
<td>expression</td>
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<tr>
<td>currency</td>
<td>evaluate</td>
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<tr>
<td>difference</td>
<td>prove</td>
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<tr>
<td>discount</td>
<td>simplify, simplest form</td>
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<tr>
<td>divide, division</td>
<td>solution (of an equation)</td>
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<tr>
<td>double, halve</td>
<td>solve (an equation)</td>
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<tr>
<td>estimate</td>
<td>squared</td>
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<tr>
<td>exact, exactly</td>
<td>substitute</td>
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<td>exchange rate</td>
<td>symbol</td>
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<tr>
<td>factor</td>
<td>term</td>
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<tr>
<td>increase, decrease</td>
<td>therefore (∴)</td>
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<tr>
<td>inverse</td>
<td>unknown</td>
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<tr>
<td>multiply, multiplication</td>
<td>value</td>
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<tr>
<td>nearly</td>
<td>variable</td>
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<tr>
<td>operation</td>
<td>verify</td>
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<td>order of operations</td>
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<td>partition</td>
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<td>product</td>
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<td>quotient</td>
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<td>remainder</td>
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<td>rough, roughly</td>
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<td>sale price</td>
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<td>sign</td>
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<td>subtract, subtraction</td>
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<tr>
<td>sum</td>
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<tr>
<td>total</td>
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</tbody>
</table>

Equations, formulae and identities:
algebra, brackets, commutative, equals (=), equation, expression, evaluate, prove, simplify, simplest form, solution (of an equation), solve (an equation), squared, substitute, symbol, term, therefore (∴), unknown, value, variable, verify.
**Shape, space and measures**

**Geometrical reasoning: lines, angles and shapes**
- adjacent (side)
- angle: acute, obtuse, right, reflex
- angles at a point
- angles on a straight line
- base (of plane shape or solid)
- base angles
- centre
- circle
- concave, convex
- degree (°)
- diagonal
- diagram
- edge (of solid)
- equal (sides, angles)
- face
- horizontal, vertical
- identical (shapes)
- intersect, intersection
- line, line segment
- opposite (sides, angles)
- parallel
- perpendicular
- plane
- point
- polygon: pentagon, hexagon, octagon
- quadrilateral: arrowhead, delta, kite, parallelogram, rectangle, rhombus, square, trapezium
- regular, irregular
- shape
- side (of 2-D shape)
- solid (3-D) shape: cube, cuboid, cylinder, hemisphere, prism, pyramid, square-based pyramid, sphere, tetrahedron
- three-dimensional (3-D)
- triangle: equilateral, isosceles, scalene, right-angled
- two-dimensional (2-D)
- vertex, vertices
- vertically opposite angles

**Transformations**
- axis of symmetry
- centre of rotation
- congruent
- line of symmetry
- line symmetry
- mirror line
- object, image
- order of rotation symmetry
- reflect, reflection
- reflection symmetry
- rotate, rotation
- rotation symmetry
- symmetrical
- transformation
- translate, translation

**Coordinates**
- axis, axes
- coordinates
- direction
- grid
- intersecting, intersection
- origin
- position
- quadrant
- row, column
- x-axis, y-axis
- x-coordinate, y-coordinate

**Construction and loci**
- construct
- draw
- measure
- net
- perpendicular
- protractor (angle measurer)
- ruler
- set square
- sketch
**Measures and mensuration**

area: square millimetre, square centimetre, square metre, square kilometre  
capacity: millilitre, centilitre, litre; pint, gallon  
length: millimetre, centimetre, metre, kilometre; mile  
mass: gram, kilogram; ounce, pound  
time: second, minute, hour, day, week, month, year, decade, century, millennium  
temperature: degrees Celsius, degrees Fahrenheit  
depth  
distance  
height, high  
perimeter  
surface, surface area  
width

**Handling data**

average  
bar chart  
bar-line graph  
class interval  
data, grouped data  
data collection sheet  
database  
experiment  
frequency  
frequency chart  
frequency diagram  
interpret  
interval  
label  
mean  
median  
mode, modal class/group  
pie chart  
questionnaire  
range  
represent  
statistic, statistics  
survey  
table  
tally  
title  

**Probability**

certain, uncertain  
chance, no chance, good chance, poor chance, fifty-fifty chance, even chance  
dice  
doubt  
equally likely  
fair, unfair  
likelihood  
likely, unlikely  
outcome  
possible, impossible  
probability  
probability scale  
probable  
random  
risk  
spin, spinner
Year 8

This list contains the new key words introduced in the Year 8 teaching programme and supplement of examples. Words from earlier years are also used. For definitions, refer to a mathematical dictionary or to QCA’s glossary at www.qca.org.uk.

**Applying mathematics and solving problems**
- conclude, conclusion
- counter-example
- deduce
- exceptional case
- justify
- prove, proof

**Calculations**
- associative
- best estimate
- degree of accuracy
- distributive
- interest
- profit, loss
- service charge
- sign change key
- tax
- value added tax (VAT)

**Numbers and the number system**

**Place value, ordering and rounding**
- ascending, descending
- billion
- index
- power

**Integers, powers and roots**
- cube, cube number
- cube root (e.g. \(3\sqrt{8}\))
- cubed (e.g. \(2^3\))
- prime factor decomposition
- to the power of \(n\) (e.g. \(6^n\))

**Fractions, decimals, percentages, ratio and proportion**
- direct proportion
- recurring decimal
- terminating decimal
- unit fraction
- unitary method

**Algebra**

**Equations, formulae and identities**
- algebraic expression
- collect like terms
- formula, formulae
- linear equation
- linear expression
- multiply out (expressions)
- prove, proof
- transform
- verify

**Sequences, functions and graphs**
- arithmetic sequence
- difference pattern
- flow chart
- general term
- gradient
- intercept
- linear function
- linear relationship
- linear sequence
- notation \(T(n)\)
- slope
- steepness
Shape, space and measures

Geometrical reasoning: lines, angles and shapes
alternate angles
bisect, bisector
complementary angles
congruent, congruence
corresponding angles
elevation
equidistant
exterior angle
heptagon
interior angle
isometric
mid-point
plan view
prove, proof
supplementary angles
tessellate, tessellation
triangular prism
view

Transformations
centre of enlargement
enlarge, enlargement
map
plan
scale, scale factor
scale drawing

Construction and loci
compasses
collection lines
locus, loci
perpendicular bisector
straight edge

Measures and mensuration
bearing, three-figure bearing
displacement
foot, yard
hectare
tonne
volume: cubic millimetre,
cubic centimetre, cubic metre

Handling data
continuous
data log
discrete
distance–time graph
distribution
interrogate
line graph
population pyramid
primary source
sample
scatter graph
secondary source
stem-and-leaf diagram
two-way table

Probability
biased
event
experimental probability
sample
sample space
theoretical probability
theory
Year 9

This list contains the new key words introduced in the Year 9 teaching programme and supplement of examples. Words from earlier years are also used. For definitions, refer to a mathematical dictionary or to QCA’s glossary at www.qca.org.uk.

Applying mathematics and solving problems
generalise
trial and improvement

Numbers and the number system
Place value, ordering and rounding
exponent
greater than or equal to (≥)
less than or equal to (≤)
significant figures
standard (index) form
upper bound, lower bound
Integers, powers and roots
index, indices
index law
index notation
Fractions, decimals, percentages, ratio and proportion
proportional to (∝)
proportionality
Calculations
compound interest
constant
cost price, selling price
reciprocal

Algebra
Equations, formulae and identities
and, or
common factor
cubic equation
cubic expression
expand the product (of two linear expressions)
factorise
identically equal to (≡)
identity
index law
inequality
quadratic equation
quadratic expression
region
simultaneous equations
subject of the formula
take out common factors
Sequences, functions and graphs
cubic function
curve
first/second difference
identity function
inverse function
inverse mapping
quadratic function
quadratic sequence
maximum/minimum point
maximum/minimum value
self-inverse
Shape, space and measures

Geometrical reasoning: lines, angles and shapes
arc
centre (of circle)
chord
circumference
convention
cross-section
definition
derived property
diameter
hypotenuse
pi (π)
plane
projection
Pythagoras’ theorem
similar, similarity
region
radius
region
section
sector
segment
similar, similarity
tangent (to a curve)

Transformations
axis of rotation-symmetry
plane symmetry
plane of symmetry

Construction and loci
circumcentre
circumcircle
circumscribed
inscribed

Measure and mensuration
adjacent, opposite, hypotenuse
angle of depression
angle of elevation
density
pressure
sine (sin), cosine (cos), tangent (tan)
speed: miles per hour, metres per second

Handling data
bias
census
cumulative frequency
estimate of the mean/median
interquartile range
line of best fit
quartiles
raw data
representative (sample)

Probability
exhaustive
independent
limit
mutually exclusive
notation: p(n) for probability of event n
relative frequency
tree diagram