

MATHS

LEVEL 4 means that I can

- Describe number patterns
- Find multiples
- Find factors
- Work out the square numbers
- Use word formulae
- Use co-ordinates in the first quadrant
- Multiply and divide whole numbers by 10 and 100
- Say my tables up to 10x10
- Add and subtract numbers like 13.64 and 48.95
- Write decimal numbers in the correct order
- Check my own answers

- Make 3D models
- Draw 2D shapes
- Find perimeters of shapes
- Find the area by counting squares

- Draw line graphs
- Present data clearly
- Read simple pie charts
- Draw frequency tables
- Find the mode
- Find the range

- Try ideas of my own

LEVEL 5 means that I can

- Multiply and divide whole numbers by 10, 100 and 1000
- Add and subtract negative numbers
- Put numbers in order including negative numbers
- Add, subtract, multiply and divide numbers like 19.75 and 34.21
- Simplify a fraction
- Work out a fraction or percentage of a number
- Multiply or divide a three digit number by a two digit number
- Use inverse operations of approximation to check my answers
- Use simple formulae like $C = 2n + 4$
- Use co-ordinates in all four quadrants

- Measure and draw angles to the nearest degree

- Remember the metric to imperial conversions
- Use and understand the formulae for the area of a rectangle
- Find the mean of discrete data
- Use the range and one of the averages to compare two sets of data
- Say what diagrams and graphs show
- Use the probability scale from 0 to 1
- Understand the experiments don't always have the same outcome

LEVEL 6 means that I can

- Use trial and improvement to solve things like $x^3 + 5x - 38$
- Work out one number as a fraction or percentage of another
- Understand that fractions, decimals and percentages can be equivalent to each other (like 0.5 - 50%)
- Calculate using ratio
- Add and subtract fractions with common denominators
- Find and describe in words the rule for the next term in a sequence (linear)
- Find and describe in words the rule for the n^{th} term in a sequence
- Solve linear equations with integer coefficients
- Plot the graph of $y = mx + c$
- Recognise 2D representations of 3D objects
- Classify quadrilaterals by knowing their properties
- Find the missing angles when two parallel lines are intersected
- Solve angle problems in polygons
- Write instructions to make a computer draw a shape
- Find the area and circumference of a circle
- Find the volume of cuboids
- Enlarge a shape by a positive scale factor
- Work with continuous data
- Construct pie charts
- Say what a scatter diagram tells us
- Understand correlation
- Find all the possible outcomes of two experiments
- Use the fact that the probability of mutually exclusive events add up to 1

LEVEL 7 means that I can

- Round to one significant figure
- Understand what happens when we multiply or divide by numbers between 0 and 1
- Multiply and divide numbers of any size
- Understand proportional change
- Describe in symbols the rule for the next term or n^{th} term in a sequence (quadratic)

- Multiply things like $(a + b)(c + d)$
- Simplify quadratic expressions
- Solve simultaneous, linear equations with two variables (using graphs or algebra)
- Solve inequalities like $6(2n - 1) > 18$
- Understand and use Pythagoras' Theorem in 2D
- Calculate lengths, areas and volumes in right prisms
- Enlarge a shape by a fractional scale factor
- Understand similarity
- Draw the locus of a moving object
- Find and understand upper and lower bounds
- Use compound measures like speed, distance, time
- Give a test a hypothesis to a situation
- Understand bias
- Find the modal class and an estimate to the mean, median and range when using grouped data
- Compare distributions using frequency polygons
- Draw a line of best fit on a scatter diagram
- Understand relative frequency

LEVEL 8 means that I can

- Solve problems involving powers and roots
- Solve problems involving standard form
- Solve problems involving repeated proportional change
- Substitute fractions and decimals into equations and expressions and find the answers
- Calculate one variable in a formula when I know the others
- Understand that $a^2 + b^2 = (a + b)(a - b)$
- Solve inequalities in two variables
- Sketch and interpret graphs of quadratic, cubic and reciprocal functions
- Interpret graphs that model real life situations
- Use congruence and mathematical similarity
- Use sine, cosine and tangent in right angled triangles in 2D
- Distinguish between formulae for perimeter, area and volume by considering dimensions
- Interpret and construct cumulative frequency diagrams
- Estimate the median and interquartile range
- Calculate the probability of a compound event