



Oliver Metcalfe V1282

TRANSFER EXAM CHECKLIST

- **NUMBER**
- Long Multiplication and Division
- Multiplying and dividing whole numbers and decimals by 10, 100 and 1000
- Know and understand the terms: square, square number, square root, cube, cube root, prime number, factor, multiple
- Order of Number Operations (BODMAS)
- Directed Numbers: +, -, x, - of negative and positive numbers.
- Rounding Numbers, significant figures and approximating. (including decimals)
- Prime Factorisation
- Indices
- Decimals : add and subtract decimals , multiplying a decimal by a whole number and by a decimal; divide a decimal by whole number, divide a decimal by a decimal, put decimals in order of size
- Fractions: Addition, subtraction, multiplication and division of fractions and mixed numbers. Putting fractions in order of size.
- Calculate fractional parts of quantities
- Percentages: finding percentage of an amount; finding one number as a percentage of another; percentage increase and decrease; percentage profit and loss. Calculating V.A.T.
- Converting decimals to fractions, fractions to decimals, percentages to decimals, decimals to percentages, fractions to percentages and percentages to fractions
- Ordering fractions, decimals and percentages
- Use of a calculator
- Estimation
- Understanding effects of multiplying and dividing by numbers between 0 and 1.
- Ratio and Proportional Change
- Mental Methods

- **ALGEBRA**
- Collecting like terms
- Multiplying out brackets
- Factorisation
- Multiplying algebraic terms
- Simplifying algebraic fractions
- Substitution
- Solve equations (up to four stages) and inequalities including fractions and brackets
- Forming simple equations
- Constructing Formulae (algebraic expressions)
- Changing the subject of formulae
- Number Sequences: stating the next two terms, finding the nth term; substitution into nth term formulae to find larger terms of a sequence, solving equations to find the value of n to match a given term of a sequence.
- Plotting co-ordinates in four quadrants
- Plotting and using graphs e.g. Plot points of the curve $y = x^2 + 2$ and draw the straight line $y = x + 4$ on the same axes; find the co-ordinates of intersection.
- Simultaneous Equations
- Trial and Improvement

- **SHAPE, SPACE AND MEASURE**
- Symmetry : Lines of symmetry and order of rotational symmetry ; reflecting shapes in mirror lines
- Congruent Shapes
- Metric Units (km, m, cm and mm; t (tonne), kg, g, mg; litre, cl and ml.)
- Conversion between metric units
- Imperial Units
- Perimeter of 2D shapes
- Area of a square, rectangle, triangle, rhombus, kite, parallelogram, trapezium and CIRCLE.
- Area of fractional and composite shapes. Area of semi-circles, quadrants and sectors.
- Circumference of a Circle. Perimeter of semi-circles, quadrants and sectors.
- Drawing Nets (of cuboids and prisms)
- Calculating the surface area of 3D shapes (possibly using a net)
- Draw 3D objects on isometric paper
- Volume of Cuboids and Prisms
- Properties of 2D shapes (square, rectangle, trapezium, kite, parallelogram, rhombus)
- Constructing triangles and quadrilaterals
- Know names of polygons to decagon
- Calculate the Interior and Exterior angles of a Polygon. Sum of the interior angles of a polygon.
- Angle Properties: Know angles in a triangle total 180° , angles in a quadrilateral total 360° , angles on a straight line total 180° , angles about a point total 360° .
- Angle relationships on parallel lines: vertically opposite angles, corresponding angles, alternate angles, interior (allied) angles total 180° . Calculating angles using the above rules.
- Time, Distance and Speed
- Eight Point Compass
- Scale Drawing
- 3-figure Bearings (including scale)
- Translation, Reflection and Rotation.
- Enlargement
- Pythagoras' Theorem

- **HANDLING DATA**
- Mean, median, mode and range (including finding these from a frequency table).
- Frequency Tables (Tally)
- Grouping data
- Frequency diagrams for grouped data
- Construct and interpret simple Line Graphs
- Construct Bar Charts and Pie charts
- Interpret information from a Bar Chart and Pie Chart
- Conversion Graphs
- Scatter Graphs and Correlation
- Probability