

Concepts list Semester 1

No **Arithmetic**

- 1 Mental Addition & Subtraction
- 2 Mental Multiplication / (x digit nos by 2 digit nos)
- 3 Mental Division / (x digit nos / 2 digit nos)
- 4 PEMDAS (mental &/or calc)
- 5 Index notation
- 6 Prime Numbers
- 7 Squares & Sq Roots
- 8 Cubes & Cube Roots
- 9 Multiples
- 10 Factors
- 11 Prime Factors of Comp Nos.

Fractions, Decimals & Percents

- 12 Fractions on a number line
- 13 Equivalent Fractions (shaded shapes etc)
- 14 Simplifying
- 15 Add & Subtract (comm denoms / proper / improper fractions)
- 16 Lowest Common Denominator & ordering fractions
- 17 Add & Subtract (non comm denoms / proper / improper fractions)
- 18 Multiplication (proper & improper fractions)
- 19 Division (proper & improper fractions)
- 20 Mixed Numbers \leftrightarrow Improper Fractions
- 21 Mixed Numbers (+ - * /)
- 22 Fractions \leftrightarrow Decimals
- 23 Ordering Decimals
- 24 Addition & Subtraction Decimals (no calc)
- 25 Mult & Div Decimals (calc)
- 26 Rounding Decimals
- 27 Percentages (out of 100) (no resource in book, 7C Q1&Q5 closest)
- 28 Fractions \leftrightarrow Decimals \leftrightarrow Percents (7C)
- 29 Percentage Discount (include estimations)
- 30 Common Percentages & Calculations (no calc)

Geometry

- 31 Draw & Measure Angles
- 32 Construct Angles w Protractor
- 33 Naming Angles
- 34 Classifying Angles (acute etc)
- 35 Lines, Parallel & Perpendicular
- 36 Complementary & Supplementary Angles
- 37 Vert Opp & Adjacent Angles (concept only not definition)
- 38 Triangles (3 types: equilateral, isosceles, scalene)
- 39 Triangles (3 types: acute, obtuse, right)
- 40 Sum of interior angles (180)
- 41 Quadrilaterals (recognize shape)
- 42 Quadrilaterals (definitions)
- 43 Angles in a Quadrilateral

Concepts list Semester 2

No **Algebra**

- 1 Describing a number pattern using words
- 2 Construct tables to represent relationships bw two variables
- 3 Using a rule (in words) to determine a functions output from a given input
- 4 Algebra conventions (eg $2 \times m = 2m$, $m \div 4 = m/4$)
- 5 Writing algebraic expressions to represent words (eg 5 times a number = $5x$).
- 6 Writing algebraic equations to represent a table of values.
- 7 Identifies terms, expressns, equatns, coefficients, vars and consts.
- 8 Substitution into formulas
- 9 Constructing tables for reasoning
- 10 Recognising and collecting like terms
- 11 Using inverse operations to find an input number in a flow chart.
- 12 Building up expressions using BODMAS
- 13 Solving equations using backtracking
- 14 Checking solutions
- 15 Backtracking using the balance method.

Measurement

- 16 Identifies appropriate metric units of length
- 17 Converts between units of length
- 18 Reading scales
- 19 Perimeter of rectangles, squares and irregular shapes
- 20 Identifies metric units of area
- 21 Estimating area
- 22 Finding the area of rectangles and triangles
- 23 Finding the area of parallelograms.
- 24 Finding the area of composite shapes using addition and subtraction.
- 25 Volume of prisms
- 26 Capacity conversions

Problem Solving

- 27 Create a table
- 28 Draw a diagram
- 29 Work backwards from the answer
- 30 Elimination
- 31 Simplify the problem
- 32 Guess and Check
- 33 Mixed problem solving (From chapter 19)

Probability

- 34 Link the words of probability w appopr dec and percent values.
- 35 Notation of sample space and elements.
- 36 Theoretical probability
- 37 Two way tables
- 38 Experimental Probability
- 39 Simulations
- 40 Generating random numbers