## Foundation paper 1

| Number (*see Ratio – some overlap of topic areas) | |
| --- | --- |
| Arithmetic | Money |
| | Negative number |
| Fractions | Order fractions, decimals, percentages |
| | Fraction of an amount |
| | Fraction arithmetic |
| Properties | Place value |
| | Product of prime factors |
| Standard Form | Conversion |
| | Calculation |
| Approximation and Estimation | Estimation |
| **Algebra** | |
| Manipulation | Simplification |
| | Substitute values |
| Equations and inequalities | Linear inequality |
| | Quadratic equation |
| Graphs | Quadratic graph |
| Sequences | Linear sequence |
| **Ratio, proportion, and rates of change (*see Number – some overlap of topic areas)** | |
| Conversion | Length |
| Percentages | Percentage of an amount |
| | Percentage increase |
| Ratio | Write as a ratio |
| | Share in a ratio |
| Proportion | Direct proportion |

| Compound Measures | Speed |
| --- | --- |
| | Density |
| **Geometry and measures** | |
| Shape | Reflection |
| | Plan and elevation |
| Angles | Angles in a polygon |
| Length, area and volume | Volume of a cube |
| | Volume of a cylinder |
| Pythagoras's Theorem and Trigonometry | Exact trigonometric values |
| **Probability** | |
| Probability | Probability |
| | Frequency tree |
| **Statistics** | |
| Diagrams | Pictogram |
| | Bar chart |
| | Stem and leaf diagram |

## Foundation paper 2

| Paper 2F – grouped by content area | |
| --- | --- |
| **Number (*see Ratio – some overlap of topic areas)** | |
| Arithmetic | Money |
| | Negative number |
| Fractions | Fraction arithmetic |
| | Order fractions |
| Properties | Order integers |
| | Multiples |
| Approximation and Estimation | Rounding |
| | Error interval |
| Other | Mathematical symbols |
| **Algebra** | |
| Manipulation | Simplification |
| | Expansion of bracket |
| | Factorisation |
| | Laws of indices |
| Equations and inequalities | Linear simultaneous equations |
| Graphs | Coordinates |
| | Straight line graph |
| Functions | Number machines |
| **Ratio, proportion and rates of change (*see Number – some overlap of topic areas)** | |
| Conversions | Mass, time, area |
| | Scale drawing |
| Percentages | Decimal to percentage |
| | Percentage profit |
| | Depreciation |

| Ratio | Write as a ratio |
| --- | --- |
| | Use of ratio |
| Proportion | Direct proportion |
| | Currency conversion |
| **Geometry and measures** | |
| Shape | Polygons |
| | Circles |
| | Parallel and perpendicular lines |
| | Transformations |
| Angles | Angles in a triangle |
| | Vertically opposite angles |
| Length, area and volume | Area of a rectangle |
| **Probability** | |
| Probability | Tree diagram |
| | Combined events |
| **Statistics** | |
| Diagrams | Interpret graph |
| | Two-way table |
| | Frequency table |
| Measures | Mode |
| | Median |
| | Mean |

# Foundation paper 3

**Paper 3F – grouped by content area**

## Number (*see Ratio – some overlap of topic areas)

| | |
|---|---|
| Arithmetic | Four operations |
| | Negative number |
| Fractions | Fraction of an amount |
| | One amount as a fraction of another |
| | Equivalent fractions |
| Properties | Factors |
| | Lowest Common Multiple |
| Powers and roots | Square root |
| Approximation and estimation | Rounding |
| Other | Calculator use |

## Algebra

| | |
|---|---|
| Manipulation | Simplification |
| | Expansion of bracket |
| | Factorisation |
| | Substitute values |
| | Change subject of a formula |
| | Forming an expression |
| Equations and inequalities | Linear equation |
| | Form an equation |
| Sequences | Linear sequence |

## Ratio, proportion and rates of change (*see Number – some overlap of topic areas)

| | |
|---|---|
| Conversions | Time |
| | Compound units |
| | Scale drawing |

| | |
|---|---|
| Percentages | Percentage to fraction |
| | One quantity as a percentage of another |
| | Percentage decrease |
| | Reverse percentage |
| Ratio | Write as a ratio |
| | 1 : $n$ form |
| Proportion | Direct proportion |
| Compound measures | Average speed |

## Geometry and measures

| | |
|---|---|
| Shape | Triangle properties |
| | Quadrilaterals |
| | Triangular prism |
| Angles | Angle properties of parallel lines |
| | Angles in a triangle |
| | Vertically opposite angles |
| | Bearings |
| Length, area and volume | Area of a triangle |
| | Area of a trapezium |
| Pythagoras's Theorem and Trigonometry | Pythagoras's Theorem |

## Probability

| | |
|---|---|
| Probability | Probability scale |
| | Probability |

## Statistics

| | |
|---|---|
| Diagrams | Frequency polygon |
| Measures | Median |
| | Range |
| Population | Comparison of distributions |