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DP Transfer examination requirements in Mathematics

Number

Indices

- Index notation
- Index laws
- Scientific notation

Radicals and Surds

- Simplest radical form
- Operations with radicals
- Rationalizing the denominator

Number Sequences

- Number sequences
- Arithmetic and geometric sequences
- Arithmetic and geometric series

Calculation

- Order of operations
- Operations with integers, fractions and decimals
- Percentages

Algebra

Equations and functions

- Linear equations and function
- Quadratic equations and function
- Exponential equations and function
- Simultaneous equations
- Trigonometric equations and function
- Inequalities
- Inverse and composite functions

Formulae

- Formula construction
- Rearrangement and substitution

Algebraic fractions

- Simplifying algebraic fractions
- Operations with algebraic fractions

Geometry

Measurement

- Perimeter and area of regular polygons, circles and parts of circles
- Surface area and volume of 3D shapes including prisms, cylinders, spheres, pyramids and cones, frustums

Trigonometry

- Pythagoras' theorem
- Bearings
- Trigonometric ratios
- The unit circle
- Sine and cosine rule
- The area of a triangle (with the use of trigonometry)

Congruence and similarity

- Congruent and similar triangles
- Proof using congruence
- Areas and volumes of similar shapes

Deductive geometry

- Circle theorems
- Geometric proof
- Cyclic Quadrilaterals

Data

Statistics

- Types of data (discrete, continuous, qualitative and quantitative)
- Measuring the centre (mean, median, mode) – stredové hodnoty
- Measuring the spread (range, interquartile range, standard deviation)
- Bivariate statistics (scatter plots, correlation, line of best fit using linear regression)
- Interpreting data from diagrams

Probability

- Experimental probability

- Theoretical probability
- Compound, mutually exclusive and independent events

Sets and Venn diagrams

- Number sets
- Interval notation
- Operations with sets (complement, union, intersection)
- Word problems with Venn diagrams

Math Test specification

Test duration: 60 minutes

Test will check the applicant's ability to solve problems on the provided topics both in simple and complex setting.

The questions will range from simple straightforward tasks such as solving an equation to more complex problems requiring the applicant to apply their knowledge in the real-life context and unfamiliar situations.

No multiple choice questions, all the working out must be shown as marks will be given for both, partial steps and the final answer.

The applicants will not be allowed to use any calculators or formulae booklets.

A pen, a pencil, a ruler are required as the applicant might be asked to construct graphs or diagrams.