Act Fast NL Year 10 KS3 Maths

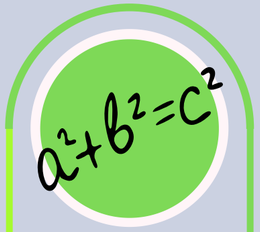
Autumn 01

Congruence, Similarity & Enlargement

Understand the difference between congruence and similarity
Enlarge a shape about a given point;
Understand and use similarity
Find missing sides in similar shapes including pairs of similar triangles
Understand and use the condition for a pair of congruent triangles

Trigonometry

Understand trigonometric ratios
Work out the missing lengths and angles in right angled triangles
Know and use the exact values of key angles



Autumn 02

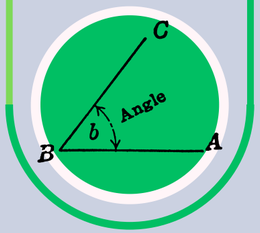
Representing Solutions of Equations and Inequalities

Form and solve equations and inequalities in a variety of contexts, including with unknowns on both sides
Represent solutions to inequalities on a number line
Represent solutions to equations graphically

Simultaneous Equations

Understand the meaning of a solution, appreciating that some equations have multiple solutions
Form and solve a pair of linear simultaneous equations graphically
Form and solve a pair of simultaneous equations algebraically

End of term assessment



Spring 01

Angles and Bearings

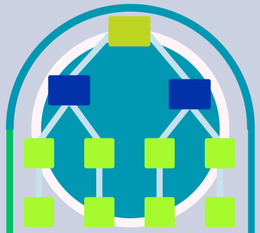
Review KS3 angle rules
Understand and use bearings

Working with Circlers

Review area and circumference
Name parts of a circle and perform related calculations
Find areas and volumes related to circles - cylinder, cone, sphere, etc...

Vectors

Understand vector notion
Vector arithmetic - Addition, subtraction and multiplication by scalar
Vectors and translations



Spring 02

Ratio & Fractions

Use ratios, including with mixed units
Fractions in ratios
Fractions from ratios
Combining ratios
Unit pricing - 'best buys'
Currency conversions

Percentages & Interest

Convert fractions, decimals & percentages
Find percentages and percentage change
Find one number as a percentage of another
Calculate simple and compound interest
Evaluate exponential change - Depreciation
Find original values

Probability

Review of single event probability - Comparing theoretical and experimental
Understand and work with mutually exclusive and independent events
Construct and interpret tree diagrams
Find probabilities from frequency trees, tables and Venn diagrams

End of term assessment

Summer 01

Collecting, Representing & Interpreting Data

Understand sampling, including the possible limitations
Construct and interpret tables and line graphs for time series data
Understand and represent with grouped data
Understand and identify correlation
Use lines of best fit, understanding the dangers of extrapolation
Construct and interpret frequency polygons
Evaluate measures of location and dispersion
Use statistical diagrams and measures to compare distributions

Summer 02

Non-Calculator Methods

Use four operations with integers, positive and negative, decimals and fractions with and without context - Include all areas of previous study
Work with exact answers - Area & volume

Types of number & Sequence

Use factors, multiples, primes and prime factorisation
Recognise arithmetic and geometric sequences
Recognise and use other sequences

Indices & Roots

Work out powers and roots
Use the rules of indices
Calculate with numbers in a standard index form

End of Y10 assessment