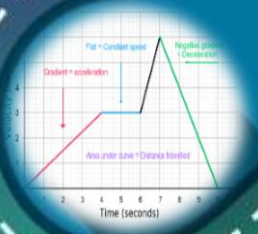
Year 10 Mathematics

GUNNERSBURY CATHOLIC SCHOOL

AD ALTIORA

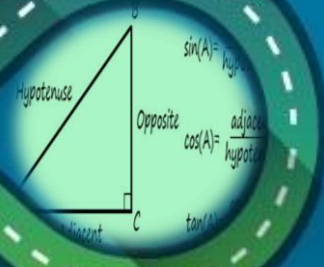


Linear graphs

- ✓ Drawing linear graphs from points
- ✓ Gradient of a line
- ✓ Drawing graphs by gradient-intercept and cover-up methods
- ✓ Finding the equation of a line from its graph
- ✓ Real-life uses for graphs
- ✓ Solving simultaneous equations using graphs

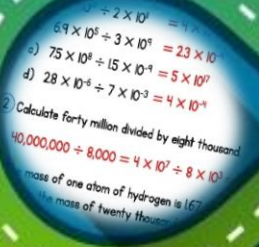
Similarity

- ✓ Similar triangles
- ✓ Areas and volumes of similar shapes



Right-angled triangles

- ✓ Pythagoras' theorem
- ✓ Finding the length of the shorter side
- ✓ Applying Pythagoras' theorem in real-life situations
- ✓ Pythagoras' theorem and isosceles triangles
- ✓ Pythagoras' theorem in three dimensions
- ✓ Trigonometric ratios
- ✓ Calculating angles
- ✓ Using the sine and cosine functions
- ✓ Using the tangent function
- ✓ Which ratio to use
- ✓ Solving problems using trigonometry
- ✓ Trigonometry and bearings
- ✓ Trigonometry and isosceles triangles



Powers and standard form

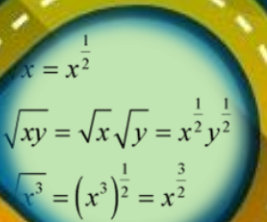
- ✓ Powers (indices)
- ✓ Rules for multiplying and dividing powers
- ✓ Standard form

Exploring and applying probability

- ✓ Experimental probability
- ✓ Mutually exclusive events and exhaustive outcomes
- ✓ Expectation
- ✓ Probability and two-way tables
- ✓ Probability and Venn diagrams

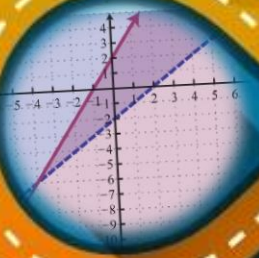
Equations and inequalities

- ✓ Linear equations
- ✓ Elimination method for simultaneous equations
- ✓ Substitution method for simultaneous equations
- ✓ Balancing coefficients to solve simultaneous equations
- ✓ Using simultaneous equations to solve problems
- ✓ Linear inequalities
- ✓ Graphical inequalities
- ✓ Trial and improvement



Counting, accuracy, powers and surds

- ✓ Rational numbers, reciprocals, terminating and recurring decimals
- ✓ Estimating powers and roots
- ✓ Negative and fractional powers
- ✓ Surds
- ✓ Limits of accuracy
- ✓ Problems involving limits of accuracy
- ✓ Choices and outcomes



Quadratic equations

- ✓ Plotting quadratic graphs
- ✓ Solving quadratic equations by factorisation
- ✓ Solving a quadratic equation by using the quadratic formula
- ✓ Solving quadratic equations by completing the square
- ✓ The significant points of a quadratic curve
- ✓ Solving one linear and one non-linear equation using graphs
- ✓ Solving quadratic equations by the method of intersection
- ✓ Solving linear and non-linear simultaneous equations algebraically
- ✓ Quadratic inequalities

Combined events

- ✓ Addition rules for outcomes of events
- ✓ Combined events
- ✓ Tree diagrams
- ✓ Independent events
- ✓ Conditional probability

Sampling and more complex diagrams

- ✓ Sampling data
- ✓ Frequency polygons
- ✓ Cumulative frequency graphs
- ✓ Box plots
- ✓ Histograms

To be continued in Year 11