Year 8 Mathematics

GUNNERSBURY CATHOLIC SCHOOL

AD ALTIORA

Percentages

- ✓ Simple interest
- ✓ Percentage increases and decreases
- ✓ Calculating the original value
- ✓ Repeated percentage changes

Using data

- ✓ Scatter graphs and correlation
- ✓ Two-way tables
- ✓ Estimation of a mean from grouped data
- ✓ Cumulative frequency diagrams
- ✓ Statistical investigations

Pythagoras' theorem

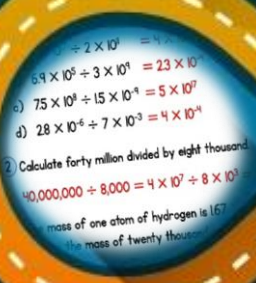
- ✓ Introducing Pythagoras' theorem
- ✓ Using Pythagoras' theorem to solve problems
- ✓ The converse of Pythagoras' theorem

Fractions

- ✓ Adding and subtracting fractions
- ✓ Multiplying fractions and mixed numbers
- ✓ Dividing fractions and mixed numbers
- ✓ Algebraic fractions

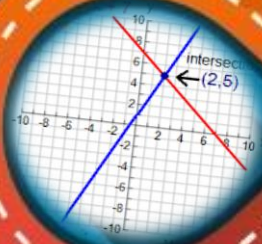
Decimal Numbers

- ✓ Powers of 10
- ✓ Standard form
- ✓ Multiplying with numbers in standard form
- ✓ Dividing with numbers in standard form
- ✓ Upper and lower bounds



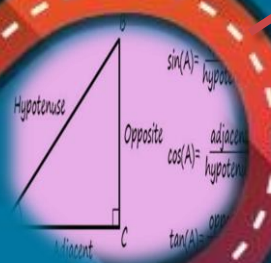
Solving equations graphically

- ✓ Graphs from equations in the form $ay \pm bx = c$
- ✓ Solving simultaneous equations by drawing graphs
- ✓ Solving quadratic equations by drawing graphs
- ✓ Solving cubic equations by drawing graphs



Compound units

- ✓ Speed
- ✓ More compound units
- ✓ Unit costs

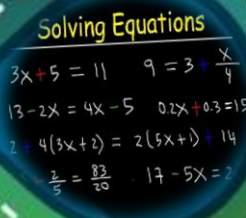


Revision

- ✓ Practice
- ✓ Revision
- ✓ GCSE preparation: solving quadratic equations
- ✓ GCSE-type question

Equations and formulae

- ✓ Multiplying out brackets
- ✓ Factorising algebraic expressions
- ✓ Expressions with several variables
- ✓ Equations with fractions

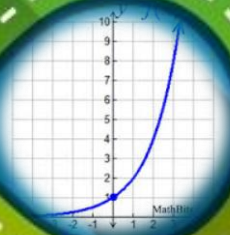


Polygons

- ✓ Properties of polygons
- ✓ Interior and exterior angles of regular polygons
- ✓ Tessellations and regular polygons

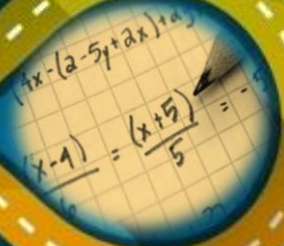
Application of graphs

- ✓ Step graphs
- ✓ Time graphs
- ✓ Exponential growth graphs



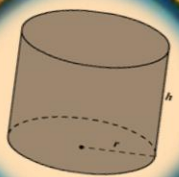
Algebra

- ✓ Expanding the product of two brackets
- ✓ Expanding expressions with more than two brackets
- ✓ Factorising quadratic expressions with positive coefficients
- ✓ Factorising quadratic expressions with negative coefficients
- ✓ The difference of two squares



Surface area and volume of cylinders

- ✓ Volume of a cylinder
- ✓ Surface area of a cylinder
- ✓ Composite shapes



Right-angled triangles

- ✓ Introduction to trigonometric ratios
- ✓ How to find trigonometric ratios of angles
- ✓ Using trigonometric ratios to find angles
- ✓ Using trigonometric ratios to find lengths