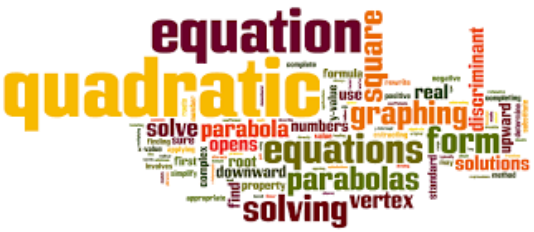
Year 11 Unit 3 Overview

Target grade for tests:

You will learn about:

- **Solve quadratics algebraically by factorising**
- **Finding approximate solutions to quadratic equations using a graph**
- **Sampling data and its limitations**
- **Vectors**



Lesson Overview

QUADRATIC EQUATIONS

- Solve a quadratic equation of the form $x^2 + bx + c$ by factorising
- Solve a quadratic equation of the form $ax^2 + bx + c$ by factorising
- Make connections between graphs and quadratic equations of the form $ax^2 + bx + c = 0$
- Make connections between graphs and quadratic equations of the form $ax^2 + bx + c = dx + e$
- Find approximate solutions to quadratic equations using a graph
- Deduce roots of quadratic functions algebraically
- Solve problems that involve solving a quadratic equation in context

DATA - SAMPLING

- Understand the limitations of sampling
- Use a sample to infer properties of a population

VECTORS

- Understand the concept of a vector
- Use diagrammatic representation of vectors
- Know and use different notations for vectors
- Add (subtract) vectors
- Multiply a vector by a scalar
- Solve simple geometrical problems involving vectors

Key Words
Refer to
http://studymaths.co.uk/glossary.php
for definitions of the key words

(Quadratic) equation
Factorise
Variable
Unknown
Manipulate
Solve
Deduce
x-intercept
Root

Continuous data, Grouped data
Axis, axes
Population
Sample
Central tendency
Mean, median, mode
Spread, dispersion, consistency

Notation
Correct use of inequality symbols when labeling groups in a frequency table

Vector
Scalar
Constant
Magnitude

Notation
a (print) and $\underline{a}$ (written) notation for vectors
$\overrightarrow{AB}$ notation for vectors
Column vector notation $\begin{pmatrix} p \\ q \end{pmatrix}$, p = movement right and q = movement up

Research	Note-making	Group work & discussion	Memorisation	Precision & accuracy	Independence	Reflection