Subject:

Mathematics

HECKMONDWIKE
GRAMMAR SCHOOL

NIL SINE LABORE

KS4 - Year 9 Curriculum Overview

Autumn Term

Topics being taught	What you will be assessed on	How you can support at home
Sequences - Arithmetic and Quadratic **Rates** - Graphs involving rates of change - Compound units e.g. Speed, Density **Measures** - Sectors, Cylinders and Spheres - Bounds and limits of accuracy **Fractions, Decimals and %** - to include successive change **Ratio and Proportion** - Direct and Inverse Proportion **Coordinate Geometry** - Parallel and perpendicular lines - Graphs of quadratic & cubic functions	**Term 1** Topic tests on each topic **Term 2** Synoptic test on everything up to Fractions, Decimals and % Topic tests on each topic	Ask your child about their *DrFrost or MyMaths* Homework they get each week Write flash cards for all the formulae in the Measures topic Use Corbett Maths for revision https://corbettmaths.com/ Use DESMOS, a free online graphical software to draw common functions

CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS

Spring Term

Topics being taught	What you will be assessed on	How you can support at home
Indices and Surds - Standard Form - Negative and Fractional Indices - Manipulation with surds **Statistics** - Grouped frequency - Cumulative Frequency - Box plots **Equations and Inequalities** - Graphical and algebraic methods - Simultaneous Equations **Probability** - Frequency trees - Tree Diagrams	**Term 3** Topic tests on each topic **Term 4** Synoptic test on everything up to Statistics Topic tests on each topic	Remind your child to show all steps of working in maths problems Discuss misleading statistics you see in news articles Use the reflections sheets from previous Milestones to revise key topics you have identified. Watch a YouTube Maths video by Hannah Fry or Marcus du Sautoy

EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS

Summer Term

Topics being taught	What you will be assessed on	How you can support at home
Transformations - Congruency - Similarity **Trigonometry** - Pythagoras' Theorem - Trigonometric ratios **Functions** - Simplifying algebraic expressions - Quadratic expressions - Solve quadratic equations by factorising - Change subject of a formula - Graphs of quadratic functions - Solve equations using trial and improvement	**Term 5** Topic tests on each topic **Term 6** Synoptic test on everything up to Trigonometry	Ask your child about the homework in their blue books and the reflection comments they are writing in green pen. Encourage your child to have a first go at a Higher Maths GCSE paper and see how many questions they can do Ask your child to explain what Trigonometry is. For Maths enrichment, do an intermediate UKMT challenge: https://www.ukmt.org.uk/