Urmston Grammar School

Newton Road Urmston Manchester M41 5UG

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Tel: 0161 748 2875

VAT Registration Number: 120 1656 61



Dear Parent/Carer,

RE: Maths Expectations and Resources

Please find in this letter a list of recommended Maths websites that offers students the opportunity to complete additional maths work each week, to build on work done in the classroom.

1. Dr Frost Maths - https://www.drfrostmaths.com/

All students have a log in to this website. Students can watch short tutorials, complete questions and get instant feedback. Students can find the Dr Frost numbers correlating to each topic on their GCSE overview sheet which is at the front of their book.

2. Maths Genie - https://www.mathsgenie.co.uk/papers.html

Students should use this website to complete past papers. Students can mark these using the video or written solutions provide.

3. **Physics and Maths Tutor -** https://www.physicsandmathstutor.com/maths-revision/gcse-questions-edexcel/

Here, students can find worksheets organising by topic or by grade. There are written solutions so that students can mark their answers.

4. OnMaths - https://www.onmaths.com/

Students can create a free account, complete questions online and receive instant feedback.

I have attached the GCSE overview sheet which students also have a copy of. Here you will find the Dr Frost numbers which correspond to each topic as well as QR codes to various revision websites.

In addition to the homework set by class teachers, we expect all students to utilise the following resources, completing independent work for a minimum of one hour each week. We appreciate your support with this.

Yours sincerely,

Miss C Murray KS4 Coordinator in Mathematics

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176-177	1.0	Linear inequalities
197 198 272	197	Simultaneous equations
268		Completing the square
193, 265, 267		Solving quadratic equations
	9. Equations and inequalities	
17, 248	24	Constructions and loci
156, 250	15	Bearings and scale drawings
77, 168, 169	77,	Translations
172-173, 236-237	172-17	Enlargement
171, 234, 235	76, 170,	Reflections and rotations
249		3D solids
	8. Transformations and constructions	8. Transformatio
298		Pyramids and cones
300		Cylinders and spheres
143-145, 239, 240	143-14	Circles
161-165		Prisms
6, 216, 218	62, 24	Units of accuracy
69, 71-74, 146, 147	69, 71-	Perimeter and area
	7. Area and volume	
283		Interpreting graphs
203, 204,	20	Cubic and reciprocal graphs
203		Quadratic graphs
166		Line segments
252		Real-life graphs
149-150	14	Graphing rates of change
187-192 263	52.18	4
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241-243	22	rymagoras: meorem
22/		Exterior angles of a polygon
227		Interior angles of a polygon
67, 68, 152-154	67, 68	Angle properties of triangles and quadrilaterals
	5. Angles and trigonometry	5. Angles a
31, 221, 222	31,	Fractions, decimals and percentages
108-113, 209	108-	Percentages
47, 91, 105, 106	47, 91	Ratio and proportion
29, 94-100	29,	Fractions
-	4. Fractions, ratio and percentages	
136, 137, 138	136,	Statistical diagrams 2
58, 128, 130-134	58, 12	Averages and range
135		Line of best fit
135		Scatter graphs
49		Time series
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199, 200	19	Non-linear sequences
85-89	_	Linear sequences
78, 79, 186	78,	Formulae
181, 182	18	Equations
83, 179	8	Expanding and factorising
81, 82		Algebraic Indices
	2. Algebra	
316, 317	22	Surds
215, 313	212-	Standard form
318		Zero, negative and fractional indices
206-206	, ,	Calculating with nowers
22, 123	1	Estimating
20, 22, 24, 38, 39	20, 22	Number problems
	1. Number	
DFM Key Skills %		Topics

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Reflecting and stretching graphs of functions	Translating graphs of functions	Non-linear granhs	Inverse proportion		19. Proportion and graphs	Solving geometric problems	Parallel and colinear points	Vector arithmetic	Vector notation	18. Vectors and geometric proof	Proof	Functions	Purther curds	Allegation calculations	Rearranging formulae	17. Further algebra	Applying circle theorems	Angles in circles	Tangents	Radii and chords	16. Circle Theorems	Graphs of cubic functions	Iteration	Solving quadratic equations graphically	Graphs of quadratic functions	Representing inequalities graphically	Solving simultaneous equations graphically	comparing and describing populations and graphs	Interpreting histograms	Drawing histograms	Box plots	Cumulative Frequency	Sampling	14. Further Statistics	Transformations of trig graphs	3D trigonometry and pythagoras	Cosine rule and bearings	Calculating areas and the sine rule	Tangent function	Graphs of sine and cosine	Accuracy	Similarity in 2D and 3D shapes 13. Further trigon	Geometric proof	Congruence	12. Similarity and congruence	Ratio and proportion	Compound measures	Growth and decay	11. Multiplicative reasoning	Venn diagrams and set notation	Independent events and tree diagrams	Experimental probability	Mutually exclusive events	Combined events	10. Probability
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