



Southmoor Academy
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Year 10 Revision

Summer 2022

Mathematics

Higher

Contents

How to revise maths

Revision Lists

Practice questions

(Revision tasks are also available on Mathswatch)

How do I revise for my GCSE Maths?

1) Start early using a “little and often” approach... It is so important that you regularly practise the material you have learnt in lessons. The only way to remember what you learnt yesterday/last week/last month/last year is to regularly try questions on those topics. If you find a topic you can't remember how to do a question on, watch the video on Mathswatch to give yourself a reminder.

2) Revise Strategically – You have a list of the topics that are in the exam...

Establish what topics are your strengths and those that need attention by sitting a mock exam, going through your homework or even just asking your teacher. Then focus on the topics that need attention...

- watch the Mathswatch on the topic
- read the notes your teacher has given you on topic in your book
- try the Mathswatch worksheets
- Attend any “revision sessions” offered in school and ask the teacher in advance if you can work on that topic
- revisit the topic in a few days and also in a few weeks time to ensure you remember.

3) Past papers, past papers, past papers! Although every year there will be a tricky question or two, the vast majority of a GCSE maths paper is fairly predictable. So by completing loads (if not all) the past papers, you will be fully prepared for the majority of the questions... it will also help you identify what topics are your “weaknesses” and will let you know which videos and practice questions you will need to work on next. Also with the “problem solving” questions, even though the ones you practise may not come up exactly the same, the skills you apply to solve it when working on the past papers will really help you be prepared for the trickier question(s) in the actual GCSE.

Also mark your papers using mark schemes/model solutions or even ask your teacher very nicely... perhaps with a chocolate bar attached to thank them for their time!

4) Timings – also when you are working on past papers, consider timing yourself to make sure you are working at a good pace. If the exam has 80 marks and is 1 hour 30 minutes long, “a minute a mark” is a good rough guideline.

5) Revision Sessions – I highly recommend taking advantage of any opportunities you have in school... who knows, the questions covered in a revision session may be the questions that come up in the actual GCSE.

6) Variety – Mix up your revision, adding in different activities... Make your own [Revision Cards](#) or [flash revision cards](#). How about making a poster on the cube numbers to add to your bedroom ceiling? How about using window pens to write the Speed, Distance, Time triangle on your window so you can learn while looking out the window? It's important that you don't get bored of revision, however don't spend too long making posters.

7) Use your lesson time wisely... although you may spend a few hours a week revising mathematics, remember you also have 5 hours of maths lessons each week. Keep 100% focussed in your lessons and avoid distractions. Who knows, the moment you decide to chat about something random, might be the moment your teacher passes on the most important piece of advice ever!

8) Create a cheat sheet –By creating a cheat sheet, you have to consider all the key facts that you may need... then as the sheet of paper gets smaller, you have the challenge of learning the material and also removing it from your cheat sheet. It's a great way to gradually learn lots of information. Also you will have a handy sheet to bring with you on the walk to school on the day of the actual GCSE.

9) Use these great resources

Vle.mathswatch.co.uk

(username:17jsmith@southmoorschool password: southmoor)

www.mathsgenie.co.uk

www.corbettmaths.com

www.onmaths.com

Paper 1

Topic	Mathswatch	Textbook Pages	GCSE POD
Arc length	167	286	MATHS-33-005
Area and proportion	117	322	MATHS-32-006
Assumption	184		
Calculation using identity	158	91	MATHS-07-001
Coordinate problem	-		MATHS-22-001
Cumulative frequency table	186	352	MATHS-16-007
Decimal to fraction	84	26	MATHS-29-002
Difference of two squares	158	57	MATHS-01-003
Estimation and volume	119	13 and 291	MATHS-33-006
Evaluating method	-		
Exact trigonometric values	173	260	MATHS-28-001
Fibonacci-type sequence	141		MATHS-23-006
Forming equation	137	85	MATHS-005-02
Geometry proof	184		MATHS-34-006
Indices	29	66-70	MATHS-10-004
Inverse proportion graph	161	94	MATHS-28-002
Laws of indices	29, 131	66	MATHS-10-004
Perpendicular gradients	-	137	MATHS-22-005
Probability with two events	151	377	MATHS-27-001
Ratio and angles problem	106	210	MATHS-31-003
Recurring decimal to fraction	177	24	MATHS-29-003
Reverse percentage	110	40	MATHS-11-004
Sharing ratio problem	106	32	MATHS-17-002
Similar triangles	144	319	MATHS-32-006
Simplify algebraic fraction	210a	59	MATHS-01-009
Simultaneous equations	162	106	MATHS-04-005
Square mixed number	-	22	
Standard form	83	71	MATHS-18-005
Tree diagram	151	375	MATHS-27-002
Trigonometric function	195a	258-272	MATHS-28-006
Turning point	160	170	
Vector geometry	219	279	MATHS-32-004

Paper 2

Topic	Mathswatch	Textbook Pages	GCSE POD
Algebra show that	193		
Area of triangles	203, 54	281	MATHS-33-001
Area trapezium and trigonometry	168, 56	258, 283	MATHS-24-002
Average speed	142	233	MATHS-35-002
Best estimate of probability	125	368	
Bounds calculation	206	16	MATHS-20-007
Constructions	165, 146a	246	MATHS-30-003
Coordinates	98		MATHS-13-001
Error interval	155	16	MATHS-20-007
Frequency table and histogram	205	349	MATHS-16-008
Inequalities	138	110	MATHS-04-010
Inverse function	214	177	MATHS-07-007
Mean and percentage	130b	335	MATHS-25-001
Median with grouped data	130a	338	MATHS-25-002
Percentage	88	40	MATHS-11-001
Probability and ratio	59, 106	364	MATHS-26-002
Product of three brackets	178	53	MATHS-01-003
Product rule for counting	69	368	MATHS-19-006
Pythagoras, area and ratio	150, 53, 106	254	MATHS-24-001
Quadratic inequality	212	111	MATHS-04-011
Ratio	107	29	MATHS-17-001
Ratio and percentage	38	29	MATHS-17-003
Similarity	200	318	MATHS-32-006
Sketch cubic curve	161, 196a	145	MATHS-28-004
Straight line graph problem	159 a and b	130	MATHS-22-003
Surds	207	73	MATHS-10-006
Surface area	171	294	MATHS-33-006
Types of data	63	326	
Venn Diagram shading	127b	196	MATHS-14-001

Paper 3

Topic	Mathswatch	Textbook Pages	GCSE POD
3D problem	115, 218	256	MATHS-33-008
Average acceleration and units	216a	236	
Composite function equation	215	176	
Compound interest	164	46	MATHS-10-008
Criticising a box plot	187	354	MATHS-16-009
Density	142	234	MATHS-35-002
Direct proportion	199	92	MATHS-17-004
Distance from speed time graph	216a	238	MATHS-28-009
Enlargement fractional scale factor	148	309	MATHS-32-003
Equation of a line	159a	134	MATHS-22-003
Equation of circle, ratio, cosine rule	197, 202b	151, 262	MATHS-28-007
Equation of circle, ratio, cosine rule	197, 202b	151, 263	MATHS-24-005
Expansion and rearrangement	93	52	MATHS-05-004
Exponential graph	194	150	MATHS-28-003
Fraction >1		17	
Invariance			
LCM	80	9	MATHS-08-004
Limits	132, 206	14	MATHS-20-006
Mean and ratio	62	335	MATHS-25-001
Multiplication of algebraic fractions	210a	59	MATHS-01-009
Parallel vector	174	273	MATHS-32-004
Probability	204	364	MATHS-27-001
Quadratic equation formula	191	102	MATHS-04-003
Range and relative frequency	125	368	MATHS-26-003
Ratio and percentage problem	106, 108	29	MATHS-17-003
Ratio with statements	200a	29	MATHS-17-003
Rearrange formula	136	80	MATHS-05-004
Roots	160	168	
Sector area comparison	167	286	MATHS-33-005
Set up and solve an equation	137	85	MATHS-10-008
Vector addition	174	273	MATHS-32-004
Venn diagram	185	196	MATHS-14-001
Venn diagram, conditional probability	185	196	MATHS-27-003