

**Douglas Academy
Mathematics Department**



National 5 Mathematics (S5/6)

A Guide for Parents

Classes

In S5/6 this session we have 2 classes working towards National 5 Mathematics. Both classes are 'mixed ability' with pupils who sat N4 Maths last session together with N5 repeats.

Textbook, Notes & Homework

All classes use the TeeJay National 5 textbook supplemented by other resources. Our N5 teachers typically go through notes and examples which pupils copy into their jotter before attempting an exercise from the textbook.

S5/6 classes have 6 periods of new work to get through each week. Teachers will set homework on a daily basis and pupils require to make their best effort to complete this. Some teachers may also issue Ink Exercises as well. Typically a week would be given to complete these.

Pupil progress in class is monitored through the use of multiple choice check-ups for each topic in the N5 course.

Additional Support

The Mathematics Department run twice weekly lunchtime drop in sessions open to all pupils from S3-S6. The drop in sessions will take place on Wednesday & Thursday lunchtimes from 1:00 to 1:30pm in Room 5. They run from early September until the SQA exams in May. All classes are repeatedly made aware of these sessions.

We also offer Supported Study in the 4/5 weeks prior to the January Prelim and the May exam. Supported Study is after school and pupils 'sign up' in advance.

Assessments & Preparation Resources

The final grade for N5 Mathematics is based solely on the final exam in May which consists of 2 papers:

Paper 1 (Non-calculator)	1 hour 15 minutes	50 marks
Paper 2 (Calculator)	1 hour 50 minutes	60 marks

UASPs

These are no longer mandatory for National 5 Mathematics.

All N5 repeat candidates will sit the final exam in May.

For pupils entering the session with an N4 pass we will assess their progress after the January Prelim. Pupils will then be offered 2 options.

- Option 1 Complete the course and prepare for the May exam.
- Option 2* Complete the course and sit the 3 UASPs

*Parents will be consulted before any such decision is taken.

October Extended Unit Test – this will cover work covered up to that point. The October Test will be non-calculator.

January Prelim – this covers all work completed to that point. **3 Practice Prelims** and at least **5 past papers** will be issued in advance. Pupils may also be issued with a revision schedule to keep them on track. When pupils get their scripts returned they will be issued with a summary sheet detailing performance for each question and identifying next steps. (The summary sheet for the January 2017 Prelim is attached for information.)

May Exam – this covers the whole course. **6 Practice Exams** and at least **5 Past Papers** will be issued in advance. Pupils may well also be issued with a revision schedule to keep them on track.

Useful Revision Websites

Notes and Examples

Maths Revision: www.mathsrevision.com

National 5 Maths: www.national5maths.co.uk

Video Past Papers and Lessons

Larbert High Youtube Lessons:

<https://www.youtube.com/channel/UCeJ1pRPUBkh5S5mzh5UvYfg/feed>

DLB Maths Youtube Past Paper Videos:

<https://www.youtube.com/channel/UCXt3XlkIJoAMovD7ngorKQQ>

Study Skills

To keep stress levels to a minimum at this time we recommend that all pupils are organised and have a clear revision plan to use their time effectively across all subjects. The following structure should help with this process:

- Ensure all pupils have access to a quiet space/area to study at home without the distractions of social media etc.
- Pupils should have planners up to date including dates and times of each exam.
- Pupils should have a clear plan of how and when they study for each subject. It is not recommended that pupils spend full days on one particular subject and should instead aim to cover around 2 subjects. Pupils should be flexible with this structure e.g. if struggling and find studying a particular subject is ineffective at that point, switch to another subject until in a better headspace.
- Ensure pupils take frequent short breaks. We work best and most efficiently in 50 minutes intervals. When taking breaks leave the working space even for 5 minutes to allow the brain to rest. Fresh air and exercise should also be encouraged even if just a walk.
- Studying for Maths.
Pupils should identify which formulae are provided in the formula sheet at the front of the exam and create a list of those which need to be learned.
Pupils should initially be working through specimen papers **with notes** to produce good quality solutions, asking for help as required. Once having worked through the first few papers with notes pupils should start to recognise and become familiar with the exam style questions and then less reliant on notes as completing specimen papers.

It is important to note that this is a stressful time and it is easy for pupils to develop a fixed mindset when they struggle to see progress. This is only natural and pupils should be made aware that the feeling of being overwhelmed is simply an indication that they value the importance of their studies. At these times pupils should be encouraged to talk about their feelings, break down problems and work through issues one at a time. Assure pupils that hard work and effort is the key to success.

Pupils should adopt a growth mindset, where instead of thinking 'I can't do this' they should take the view of 'I can't do this YET'. This more positive approach to learning combined with hard work provides a better chance of achieving success.

Appendix National 5 (S5) Mathematics (TJ Nat. 5 Textbook)

Session Plan (2019-2020) Updated June 2019

<u>Chapter</u>	<u>Start Date</u>
<u>EXPRESSIONS & FORMULAE</u>	
4. Algebraic Operations	3 rd June
13. Circles – Arcs & Sectors	10 th June
17. Surds & Indices	17 th June
Volumes Of Solids (TJ N5 Supplementary Booklet)	15 th Aug
3. Fractions	26 th Aug
7. Factorising	2 nd Sep
9. Algebraic Fractions	9 th Sep
6. Linear Relationships	16 th Sep

The Expressions & Formulae UASP will be completed on an ‘Outcome by outcome’ basis this session TBC

RELATIONSHIPS

5. Pythagoras Theorem	26 th Sep
4. Simultaneous Equations	3 rd Oct
OCTOBER TEST w/b Mon 7th Oct.	
10. Changing The Subject	21 st Oct
12. Functions & Graphs	24 th Oct
14. Quadratic Functions 1	29 th Oct
16. Trigonometric Graphs	11 th Nov
19. Quadratic Functions 2	20 th Nov
20. Trigonometric Equations	27 th Nov

Exam revision

2nd Dec

PRELIMS

Tue 7th JANUARY – Mon 20th JANUARY

Chapter

Start Date

Similar Figures (TJ N5 Supplementary Booklet)

21st Jan

The Circle (TJ N5 Supplementary Booklet)

28th Jan

**The Relationships UASP will be completed on an ‘Outcome by outcome’ basis
this session TBC**

APPLICATIONS

2. Further calculations involving percentages

3rd Feb

8. Trigonometric formulae

13th Feb

11. Statistics

24th Feb

15. Vectors

2nd Mar

18. Scattergraphs

11th Mar

**The Applications UASP will be completed on an ‘Outcome by outcome’ basis
this session TBC**

Exam revision

16th MARCH

EASTER HOLIDAY is Mon 6th April – Fri 17th April inclusive

SQA N5 Mathematics Exam 2020

Tuesday 12th May

Paper 1 (Non-calculator)

9.00 – 10.15

Paper 2 (Calculator)

10.35 – 12.25

S5/6 NATIONAL 5 JANUARY 2017

PRELIM SUMMARY SHEET

Name.....

Class.....

PAPER 1

	TOPIC	PO SS IB LE	AC TU AL	SQA PAPERS	SPECIMEN PRELIM PAPERS A-F	TEXTBOOK
				Yr Paper Q	Paper Q	Pg Ex Q
1	Fractions - dividing involving mixed numbers	2		Spec. P1 Q1	A P1 Q1 C P1 Q3	
2(a)	Indices – multiply out brackets and simplify	2			C P1 Q5 D P1 Q9	
(b)	Evaluate using fractional indices	2				
3	Find the gradient using 2 points	2			A P1 Q2 D P1 Q5a	
4	Change the subject of a formula	3		2014 P2 Q11 Spec. P1 Q8		
5(a)	Surds – simplification involving like terms	3		2014 P1 Q8		
(b)	Surds – rationalising denominator	3		Spec. P1 Q5		
6(a)	Functions – evaluate $f(-2)$	2			A P1 Q13 B P1 Q9 D P1 Q10	
(b)	Functions – solve equation	3		Spec. P1 Q4		
7	Solve equation using algebraic fractions	3			D P1 Q6c	p94 Ex9.3 Q10
8	Perimeter calculation involving arc length (non-calculator)	3			B P2 Q9 E P2 Q12a	
9	Equation of a line given gradient and coordinate in the form $ax + by = c$	3		2014 P1 Q11		P54 Ex6.3 Q4 P61 Ex6.7 Q3
10(a)	Factorising - difference of two squares	1			A P1 Q4a E P1 Q7b	
(b)	Apply factorisation to numbers	2				

11	Algebraic fraction – subtraction	3		Spec. P1 Q11 2014 P2 Q9		
12	Trig graph – sketch $y = a\sin bx$	3		2014 P1 Q10	E P1 Q5	
	PAPER 1 TOTAL	40				

PAPER 2

	TOPIC	PO SS IB LE	AC TU AL	SQA PAPERS 2014 & Specimen Yr Paper Q	Specimen Papers A-F Paper Q	TEXTBOOK Pg Ex Q
1	Algebraic fraction – factorise to simplify	3			C P2 Q7 D P1 Q4b,c E P1 Q7 F P1 Q5	
2	Quadratics – completing the square	2		2014 P1 Q3 Spec. P1 Q9a	D P1 Q1	
3	Scientific notation problem	3		Spec. P2 Q2	A P2 Q2 B P2 Q2 E P2 Q1	
4	Circle – angle calculation from Area of a sector	4			C P2 Q9 E P2 Q12a	
5	Trig graph – from graph find equation of form $y = a\sin bx + c$	3		2014 P1 Q10 Spec. P2 Q10	C P1 Q4 E P1 Q5	
6	Converse of Pythagoras problem	4		2014 P2 Q6	F P2 Q9	
7	Simultaneous equations problem	5		2014 P2 Q3 Spec. P1 Q10	C P2 Q6 D P2 Q5 E P1 Q9	
8	Multiply out brackets (2 term by 3 term)	3		Spec. P1 Q2	D P2 Q1	

9(a)	Volume of hemisphere and cone problem	2		2014 P2 Q7	A P2 Q8 B P2	
(b)		3		Spec. P2 Q6	Q12 D P2 Q10	
10	Quadratic – find roots and turning point	5			B P1 Q4 D P1 Q10	
11	Straight line – match equation to graph	3				Pg53 Ex6.2 Q11
12	Pythagoras problem involving algebraic fractions	3		Spec. P1 Q12	C P1 Q8	
13	Circle problem involving Pythagoras	4		2014 P1 Q12	B P1 Q11 C P2 Q8	
14(a)	Factorise Trinomial State roots	2		Spec. P1 Q4	D P1 Q10	
(b)		1				
	PAPER 2 TOTAL	50				
	TOTAL (PAPER 1 + PAPER 2)	90		_____ %		

Parent/Carer Signature _____