



Never Stop Flying

MATHS

Achieving Excellence through a Values Driven Education

Examinations



Paper 1
Non Calculator
1 hr 30 minutes
80 marks

Paper 2
Calculator
1 hr 30 minutes
80 marks

Paper 3
Calculator
1 hr 30 minutes
80 marks

Exam Board: Edexcel
Foundation: Grades 1 to 5
Higher: Grades 3 to 9



Y10 Course Structure



Look to build on the skills they have learnt in Years 7-9 and apply them into GCSE structured questions.

6 units of work throughout the year.

Each unit will contain a mixture from the 5 main strands:

Number, Algebra, Ratio, Geometry and Statistics



Be Determined

Y10 Tests/Assessments



Assessment each half term – largely GCSE questions on material previously taught.

Students will sit amended past papers in class apart from the final assessment window at the end of Y10 where it will be sat in the Sports Hall.



Be Determined

sparx

Sparx provides 1 hour of personalised homework each week.

Every maths topic is covered with over 10,000 support videos

Regular communication home to report how your child is progressing with their homework.



Y10 Review Lesson



Y10 Review Lesson (H)



Test 1A

The first 10 questions are non-calculator. The next 15 questions are calculator.

Q	Question	Answer	Sparx										
1	5 women can build a shed in 4 hours. How long will it take 2 women working at the same rate, to build the same shed?		U357										
2	Rearrange $3x + a = y$, to make x the subject		U556										
3	Calculate $2\frac{3}{4} - 1\frac{1}{2}$ leave your answer as a mixed number.		U793										
4	Given that £1 = €1.09, convert €74 into Euros.		U610										
5	Write 84 as a product of its prime factors. Leave in index form.		U739										
6	Find the perimeter of a semi-circle where the straight edge is 8cm long. Leave your answer in terms of π		U604										
7	Estimate $\frac{11.28 + 7.74^2}{0.28 - 5.44}$		U225										
8	Simplify by writing as one fraction $\frac{x+2}{x} + \frac{2x-1}{4}$		U685										
9	It takes 4 cleaners, 6 hours to clean 3 rooms. How long will it take 8 cleaners to clean 4 rooms?		U357										
10	A is proportional to the square of B. When B = 4, A = 80. Express A in terms of B		U407										
11	Write out the prime factor decomposition of 630.		U739										
12	Given $2475 = 3^2 \times 5^2 \times 11$, hence or otherwise, find the Highest Common Factor and Lowest Common Multiple of 630 and 2475.		U250										
13	Calculate $2\frac{2}{4} + 4\frac{1}{2} \times 3\frac{3}{4}$ leave your answer as a mixed number		U976										
14	11 people in a room have a mean age of 27 years old. One person leaves the room, the mean age is now 26 years old. What is the age of the person who left the room?		U291										
15	Rearrange $ab + c = ad + e$, to make a the subject of the formula		U556										
16	Find the perimeter of the sector of the circle, with radius 9cm and interior angle 40°		U221										
17	Solve $5e - 12 = 36 - e$		U870										
18	P is inversely proportional to the square root of T. When $P = 6$, $T = 9$. Find the value of P when $T = 36$		U364										
19	Solve $\frac{x+2}{x} - \frac{x-2}{5} = 2$												
20	Rearrange $4f^2 - 5h = 3$ to make f the subject of the formula		U556										
21	The probability of spinning a biased spinner is given the table below <table border="1" style="margin-left: 20px;"> <tr> <td>Number</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>Probability</td> <td>$2x$</td> <td>0.2</td> <td>$x - 0.2$</td> <td>0.1</td> </tr> </table> What is the probability of the spinner landing on a 1	Number	1	2	3	4	Probability	$2x$	0.2	$x - 0.2$	0.1		U683
Number	1	2	3	4									
Probability	$2x$	0.2	$x - 0.2$	0.1									
22	Find the arc length of a sector of size 125° and radius 6cm. Leave your answer to 3 significant figures.		U221										
23	Point A has coordinates $(-2, 5)$ and point B has coordinates $(3, -1)$. Find the length AB.		U385										
24	The average age of staff in the maths department is 40. There are 7 members of staff (Jill, Nicky, Wendy, Cathy, Cieran, Alan and Andy). The average age of Jill, Nicky and Wendy is 41. The average age of Andy, Alan and Cathy is 43. How old is Cieran?		U291										
25	y is inversely proportional to d^2 . When $d = 10$, $y = 4$. d is directly proportional to x^2 . When $x = 2$, $d = 24$. Find a formula for y in terms of x . Give your answer in its simplest form.		U407, U138										

- Mini Assessment occurring every 2 weeks
- Mixture of recently taught material plus key GCSE skills
- 3 Test format - Test A/B/C asks the same questions but different numbers.
- Students need to be aiming to improve each test
- Sparx Maths clip numbers for practise / Support




Be Supportive

Learner Pathways



Y10 Pathway

 Be Brave

Week 1A - 6B

Unit 1	ET	Sparx
Rearranging formula		U556
Direction proportion		U721, U640 U407
Inverse proportion		U633, U338 U872, U498 U138
Arc length and perimeter of sectors		U604, U221
Fraction arithmetic		U736, U793 U475, U544
Algebraic fractions		U685, U457 U824, U103
Estimation		U225
Prime factorisation with HCF and LCM		U739, U751 U529
Solving linear equations		U325, U870 U505
Pythagoras' theorem		U385, U541

Week 18B - 23A

Unit 4	ET	Sparx
Mean from a table		U569
Histograms - drawing		U185, U814
Manipulating surds		U633, U338 U872, U498
Rationalising the denominator		U707, U281
Angles in parallel lines		U826
Circle theorems		U459, U251 U489, U130 U235, U694 U985, U772
Negative and fractional indices		
Enlargements from a centre (including negative SF)		U519, U134
Drawing Venn diagrams		U476
Set notation and Venn diagrams		U296, U748

Week 7A - 12B

Unit 2	ET	Sparx
Adjusting the mean and averages		U291, U526 U456, U260
Problem solving with the mean		U291
Percentage problems (reverse, compound, change)		U286, U278 U773, U671 U332
nth term of linear sequences		U498, U530
nth term of quadratic sequences		U206
Finding the equation of a line from a graph		U315, U669 U477, U848
Parallel and perpendicular gradients		U377, U898
Expanding brackets		U179, U768 U606
Scatter graphs		U199, U277 U128
Box Plots		U879, U837

Week 24B - 28B

Unit 5	ET	Sparx
Interior and exterior angles of polygons		U427
Solving quadratics		U228, U960 U589, U665
Ratio (changing parts)		U687, U753 U595, U865
Volume of cylinders, cones and spheres		U915, U116 U617, U484
Problem solving with volume		U426, U950
Forming and solving quadratics		U150
Cumulative Frequency & Boxplots		U182, U642 U507
Probability trees		U558, U729 U806
Bearings		U525, U107
Surface area of spheres/cones		U893, U523 U771, U334

Week 13A - 17A

Unit 3	ET	Sparx
Right angle trigonometry		U283, U545 U967, U170
Sine and Cosine rule		U952, U591 U592
Algebraic proof		U582
Similar shapes (ASF & VSF)		U551, U578 U690, U110
Inequalities		U508, U755 U738, U145
Factorising quadratics		U178, U858
Simultaneous equations		U760, U757 U547
Completing the square		U397
Solving quadratics		U228, U960 U589, U665
Speed-Distance-Time problems		U151

Week 29A - 34B

Unit 6	ET	Sparx
Sketching graphs		U989, U667 U980, U593
Describing transformations		U196, U799 U696, U766
Density-Mass-Volume		U910, U842
Bounds and error intervals		U657, U587
Compound functions		U895, U448
Inverse functions		U996
Standard form		U330, U534 U264, U290
Vectors		U903, U564 U781, U660
Recurring decimals		U689
Transformations of graphs		U598, U487 U455

Important Dates

Week 7A - Trial Exam 1 (non-calc)
Week 27A - Trial Exam 3 (calc)

Week 18B - Trial Exam (calc)
Week 36B - Practice Exams (2 full papers)

*A separate revision list will be shared for each trial exam via the Teams page



Be Supportive