

Homework Space Units: Junior Cycle Maths (Ordinary Level)

Units	Homework Assignments
1. Sets	1.1 Set notation
	1.2 Subsets
	1.3 Universal set
	1.4 Problem solving using sets
	1.5 Final test
2. Natural numbers	2.1 Addition and subtraction
	2.2 Factors and multiples
	2.3 Multiplication and division
	2.4 Commutative, associative and distributive properties and order of operations
	2.5 Final test
3. Integers	3.1 Integers
	3.2 Addition and subtraction of integers
	3.3 Multiplication and division of integers
	3.4 Order of operations
	3.5 Final test
4. Geometry	4.1 Basic concepts
	4.2 Angles
	4.3 Axioms, perpendicular, parallel, vertical, horizontal lines
	4.4 Final test
5. Constructions 1	5.1 Construction equipment, Construction 1, Construction 2
	5.2 Construction 4, Construction 5
	5.3 Construction 6, Construction 8
	5.4 Final test
6. Rational numbers	6.1 Rational numbers or fractions
	6.2 Adding and subtracting fractions
	6.3 Multiplying fractions
	6.4 Dividing fractions and ratio
	6.5 Final test
7. Decimals and percentages	7.1 Decimals, fractions and percentages
	7.2 Calculating with percentages
	7.3 Rounding and percentage increase
	7.4 Percentage increase and decrease
	7.5 Final test
8. The fundamental principles of counting and probability	8.1 Listing outcomes
	8.2 The fundamental principle of counting
	8.3 Introducing probability, relative frequency and fairness, theoretical probability

	8.4 Expected frequency, sample spaces for independent events
	8.5 Final test
9. Co-ordinate geometry 1	9.1 The Cartesian plane
	9.2 Final test
10. Transformation geometry	10.1 Axis of Symmetry
	10.2 Transformations
	10.3 Axial Symmetry
	10.4 Rotations
	10.5 Final test
11. Number patterns 1	11.1 Patterns
	11.2 Linear patterns
	11.3 Some non-linear sequences
	11.4 Real world phenomena involving patterns
	11.5 Final test
12. Statistics 1: Collecting data	12.1 Statistical investigations
	12.2 Collecting data
	12.3 Frequency tables
	12.4 Final test
13. Statistics 2: Representing data geographically	13.1 Line plots and bar charts
	13.2 Pie charts
	13.3 Stem and leaf plots
	13.4 Histograms
	13.5 Final test
14. Statistics 3: Representing data numerically and interpreting data	14.1 Measures of central tendency 1: mode and median
	14.2 Measures of central tendency 2: mean
	14.3 Deciding which average to use
	14.4 Measure of spread
	14.5 Final test
15. Algebra: An introduction	15.1 Evaluating expressions
	15.2 Adding and subtracting terms
	15.3 Multiplying terms
	15.4 Multiplying with brackets
	15.5 Writing expressions
	15.6 Final test
16. Algebra: Solving Linear Equations	16.1 Linear equations 1
	16.2 Linear equations 2
	16.3 Solving equations with brackets
	16.4 Solving word problems
	16.5 Final test
17. Distance, speed, time and real-life graphs	17.1 Time and the 24-hour clock
	17.2 Timetables
	17.3 Formulas
	17.4 Graphs
	17.5 Final test
18. Geometry 2: Theorems	18.1 Vertically opposite angles

	18.2 Alternate and corresponding angles
	18.3 Triangles
	18.4 Final test
19. Constructions 2	19.1 Angles and triangles given SSS
	19.2 Angles and triangles given SAS
	19.3 Triangles given ASA
	19.4 Right angle triangles and rectangles
	19.5 Final test
20. Applied measure 1	20.1 Area and perimeter of rectangles and squares
	20.2 Nets of rectangular solids
	20.3 Surface area of rectangular solids
	20.4 final test
21. Applied arithmetic	21.1 Income tax
	21.2 VAT: Value added tax
	21.3 Household bills, profit, loss, discounts
	21.4 Ratio and currency exchange
	21.5 compound interest
	21.6 Final test
22. Algebra 1: Solving linear equalities	22.1 Graphing inequalities
	22.2 Solving linear inequalities
	22.3 Solving linear inequalities sign change
	22.4 Inequalities with brackets
	22.5 Final test
23. Indices	23.1 Indices and square roots
	23.2 First law
	23.3 Second law
	23.4 Third law
	23.5 Scientific notation
	23.5 Final test
24. Geometry 3: Further theorems	24.2 Quadrilaterals
	24.2 Similar triangles
	24.3 Congruent triangles
	24.4 The theorem of Pythagoras
	24.5 Circle geometry and Introduction to proof
	24.5 Final test
25. Co-ordinate geometry 2	25.1 Mid-point
	25.2 Slope of line
	25.3 Distance between two points
	25.4 Equation of a Line of the Form $y = mx + c$
	25.5 Equation of a Line with slope m and containing a point.
	25.6 Final test
26. Algebra 2: Solving simultaneous equations	26.1 Simultaneous equations with graphs
	26.2 Verifying solutions of simultaneous equations
	26.3 Solving simultaneous equations using algebra
	26.4 Solving word problems using simultaneous equations
	26.5 Final test
27 Applied measure 2	27.1 Perimeter and area of triangles

	27.2 Perimeter and area of discs (circles)
	27.3 Perimeter and area of combinations of shapes
	27.4 Volume of rectangular solids
	27.5 Volume of cylinders and scale
	27.6 Final test
28 Algebra 3: Algebraic factorising	28.1 Highest Common Factor expressions
	28.2 Grouping factors 1 and 2
	28.3 Quadratic trinomials
	28.4 The difference of two squares
	28.5 Final test
29 Algebra 4: Solving quadratic equations	29.1 Solving quadratic equations HCF diff 2 squares
	29.2 Solving quadratic equations trinomials
	29.3 Solving quadratic equations word problems
	29.4 Final test
30. Algebra 5: Algebraic fractions	30.1 Algebraic fractions
	30.2 Solving equations with algebraic fractions
	30.3 Division in algebra
	30.4 Final test
31. Functions	31.1 Mapping diagrams and important terms
	31.2 Function notation
	31.3 Linear functions
	31.4 Quadratic functions and graphing functions
	31.5 Final test
32. Number patterns 2	32.1 General term of a linear sequence
	32.2 Graphing patterns
	32.3 Patterns graphs for problem solving
	32.4 Final test
33. Trigonometry	33.1 Pythagoras and trigonometric ratios
	33.2 Finding the length of a right-angled triangle
	33.3 Finding angles
	33.4 Using trigonometry to solve practical problems
	33.5 Final test