

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
Mathematics								
Kindergarten Mathematics			140	6	80	800	50	50
#	TOPIC	TITLE						
1	Using and applying number	The numbers 1 to 5						
2	Using and applying number	The numbers 6 to 9						
3	The number system	Ordinal numbers 1 to 9						
4	Using and applying number	Zero and counting numbers 1 to 9						
5	Using and applying number	The number 10						
6	Using and applying number	Numbers 11 to 20						
7	Using and applying number	Using place value to order numbers up to 20						
8	Reasoning	Simple addition up to the number 10						
9	Reasoning	Simple addition up to the number 20						
10	Calculations	Subtraction up to the number 10						
11	Calculations	Subtraction by Comparison						
12	Length	Compare length by using informal units of measurement						
13	Weight/mass	Introducing the concept of mass						
	Lines and angles	Describing position.						
Grade 1 Mathematics			210	6	120	1200	50	50
#	TOPIC	TITLE						
1	Using and applying number	The number 10						
2	Using and applying number	Numbers 11 to 20						
3	Using and applying number	Using place value to order numbers up to 20						
4	Calculations	The numbers 20 to 99						
5	Calculation 10-100	Counting by 1, 2, 5, and 10 to 100						
6	Reasoning	Simple addition up to the number 10						
7	Reasoning	Simple addition up to the number 20						
8	Calculations	Subtraction up to the number 10						
9	Calculations	Subtraction by Comparison						
10	Calculations	Subtraction up to the number 20 and beyond						
11	Addition	Addition to 99						
12	Subtraction	Subtraction up to the number 99						
13	Length	Compare length by using informal units of measurement						
14	Weight/mass	Introducing the concept of mass						
15	Lines and angles	Describing position.						
16	Time, months	Months and seasons of the year						
17	Time, days of week	Days of the week						
18	Time, duration	Duration						
19	Time, minutes	Analogue - Telling time - minutes in the hour						
20	Time, units	Units of time						
21	Time, a.m. p.m.	AM and PM time						
Grade 2 Mathematics			270	6	150	1550	50	50
#	TOPIC	TITLE						
1	Using and applying number	Numbers 11 to 20						
2	Using and applying number	Using place value to order numbers up to 20						
3	Calculations	The numbers 20 to 99						
4	Calculation 10-100	Counting by 1, 2, 5, and 10 to 100						
5	Calculation-larger numbers	The numbers 100 to 999						
6	Reasoning	Simple addition up to the number 10						
7	Reasoning	Simple addition up to the number 20						
8	Calculations	Subtraction up to the number 10						
9	Calculations	Subtraction by Comparison						
10	Calculations	Subtraction up to the number 20 and beyond						
11	Addition	Addition to 99						
12	Subtraction	Subtraction up to the number 99						
13	Subtraction	Subtraction with borrowing						
14	Subtraction	Subtraction of two-digit numbers Involving comparison.						

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
15	Subtraction	Subtraction up to the number 999 using the renaming method						
16	Calculation-grouping	Multiplication using equal groups						
17	Calculation-grouping	Multiplication using repeated addition						
18	Calculation-multiplication	The multiplication sign						
19	Calculation sharing/division	Strategies for division						
20	Calculation-multiples	Multiples of 10 up to 100						
21	Multiplication	Multiplication – important facts.						
22	Length	Compare length by using informal units of measurement						
23	Length	Using the metre as a formal unit to measure perimeter						
24	Length	Using the formal unit of the centimetre to measure length and perimeter						
25	Weight/mass	Introducing the concept of mass						
26	Weight/mass	The kilogram						
27	Weight/mass	The gram and net mass						
28	Length	Read and calculate distances on a map using the formal unit kilometre						
29	Lines and angles	Describing position.						
30	Time, months	Months and seasons of the year						
31	Time, days of week	Days of the week						
32	Time, duration	Duration						
33	Time, minutes	Analogue – Telling time – minutes in the hour						
34	Time, units	Units of time						
35	Time, a.m. p.m.	AM and PM time						
36	Time, quarter to, past	Quarter past and quarter to						
37	Time, minutes past the hour	Minutes past						
38	Time, minutes to the hour	Minutes to						
39	Time, digital, analogue	Comparing analogue and digital time						
40	Time, digital	O'clock and half past using digital time						
41	Time, analogue	O'clock and half past on the analogue clock						
42	Time, 24-hour	24 hour time						
43	Data	Pictograms						
44	Data	Bar Charts						
45	Data	Line graphs.						
Grade 3 Mathematics			300	6	175	1750	50	50
#	TOPIC	TITLE						
1	Using and applying number	Numbers 11 to 20						
2	Using and applying number	Using place value to order numbers up to 20						
3	Calculations	The numbers 20 to 99						
4	Calculation 10-100	Counting by 1, 2, 5, and 10 to 100						
5	Calculation-larger numbers	The numbers 100 to 999						
6	Place value	The numbers 1000 to 9999						
7	Counting and numeration	The numbers 10 000 to 99 999						
8	Counting and numeration	Seven digit numbers						
9	Addition	Addition to 99						
10	Subtraction	Subtraction up to the number 99						
11	Subtraction	Subtraction with borrowing						
12	Subtraction	Subtraction of two-digit numbers Involving comparison.						
13	Addition	Addition up to the number 999						
14	Subtraction	Subtraction up to the number 999 using the renaming method						
15	Multiplication	Multiples and factors of whole numbers						
16	Calculation-multiplication	The multiplication sign						
17	Calculation sharing/division	Strategies for division						
18	Calculation-multiples	Multiples of 10 up to 100						
19	Multiplication	Multiplication – important facts.						
20	Problems	Solve and record division using known facts and sharing						
21	Multiplication	Multiplication using extended algorithms.						
22	Division	Division with and without a remainder.						
23	Division	Dividing two and three digit numbers by a single digit number.						
24	Decimals	Introduction to decimals						

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
25	Decimals	Comparing and ordering decimals to two decimal places						
26	Fractions	Using fractions 1/2, 1/4, 1/8 to describe part of a whole						
27	Fractions	Using fractions 1/2, 1/4, 1/8 to describe parts of a group or collection						
28	Length	Compare length by using informal units of measurement						
29	Length	Using the metre as a formal unit to measure perimeter						
30	Length	Using the formal unit of the centimetre to measure length and perimeter						
31	Weight/mass	Introducing the concept of mass						
32	Weight/mass	The kilogram						
33	Weight/mass	The gram and net mass						
34	Capacity	Converting between volume and capacity using millilitres and litres						
35	Length	Read and calculate distances on a map using the formal unit kilometre						
36	Lines and angles	Describing position.						
37	Time, minutes	Analogue – Telling time – minutes in the hour						
38	Time, units	Units of time						
39	Time, a.m. p.m.	AM and PM time						
40	Time, quarter to, past	Quarter past and quarter to						
41	Time, minutes past the hour	Minutes past						
42	Time, minutes to the hour	Minutes to						
43	Time, digital, analogue	Comparing analogue and digital time						
44	Time, digital	O'clock and half past using digital time						
45	Time, analogue	O'clock and half past on the analogue clock						
46	2-D shapes	Recognise and name triangles						
47	2-D shapes	Spatial properties of quadrilaterals						
48	2-D shapes	Using the prefix to determine polygons						
49	3-D shapes	Constructing models.						
50	3-D shapes	Recognise and name prisms according to spatial properties						
51	3-D shapes	Recognise and name pyramids according to spatial properties						
52	3-D shapes	Recognise nets for prisms, pyramids, cubes and cones						
53	3-D shapes	Viewing 3-D shapes.						
54	Data	Pictograms						
55	Data	Bar Charts						
56	Data	Line graphs.						
Grade 4 Mathematics			350	6	200	2000	50	50
#	TOPIC	TITLE						
1	Calculation-larger numbers	The numbers 100 to 999						
2	Place value	The numbers 1000 to 9999						
3	Counting and numeration	The numbers 10 000 to 99 999						
4	Counting and numeration	Seven digit numbers						
5	Subtraction	Subtraction with borrowing						
6	Subtraction	Subtraction of two-digit numbers Involving comparison.						
7	Addition	Addition up to the number 999						
8	Subtraction	Subtraction up to the number 999 using the renaming method						
9	Counting and numeration	Addition to 9999 and beyond						
10	Subtraction	Subtraction involving four digit numbers and beyond using the renaming method.						
11	Multiplication	Multiples and factors of whole numbers						
12	Problems	Solve and record division using known facts and sharing						
13	Multiplication	Multiplication using extended algorithms.						
14	Division	Division with and without a remainder.						
15	Division	Dividing two and three digit numbers by a single digit number.						
16	Multiplication	Multiplication by 2 and 3 digits						
17	Division	Divide whole numbers by a 2 digit divisor						
18	Multiplication	Multiplying 2-digit numbers by multiple of 10						
19	Multiplication	Multiplying 3 and 4-digit numbers by multiples of 100						
20	Multiplication	Multiplying 2-digit numbers by 2-digit numbers						

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
21	Division/repeat subtraction	Repeated subtraction with divisors less than 20 with no remainders						
22	Division/repeat subtraction	Repeated subtraction by multiples of 10 with divisors less than 20 with no remainders						
23	Division/repeat subtraction	Repeated subtraction by multiples of 2, 3 and 4 with divisors greater than 20 with no remainders						
24	Division/repeat subtraction	Repeated subtraction by multiples of 1,2 and 3 with divisors less than 20 with remainders						
25	Division/repeat subtraction	Repeated subtraction by multiples of 10 with divisors less than 20 with remainders						
26	Division/repeat subtraction	Repeated subtraction with divisors greater than 20 with remainders as fractions						
27	Division/repeat subtraction	Repeated subtraction with divisors less than 35 with some remainders						
28	Division/repeat subtraction	Repeated subtraction with divisors less than 55 with dividends of 3 and 4-digits with some remainders						
29	Division/repeat subtraction	Repeated subtraction with divisors greater than 50 with dividends of thousands and some remainders						
30	Division/repeat subtraction	Using divide, multiply and subtraction in the bring down method						
31	Decimals	Multiplying decimals by 10, 100 and 1000						
32	Decimals	Dividing decimals by 10, 100 and 1000						
33	Decimals	Introduction to decimals						
34	Decimals	Comparing and ordering decimals to two decimal places						
35	Decimals	Decimals with whole numbers 10th and 100th						
36	Decimals	Adding decimals to two decimal places						
37	Decimals	Subtracting decimals to two decimal places						
38	Decimals	Using decimals – shopping problems						
39	Decimals	Using decimals to record length						
40	Fractions	Using fractions 1/2, 1/4, 1/8 to describe part of a whole						
41	Fractions	Using fractions 1/2, 1/4, 1/8 to describe parts of a group or collection						
42	Fractions	Comparing and ordering fractions						
43	Fractions	mixed numbers (mixed numerals)						
44	Fractions	Improper fractions						
45	Fractions	Fractions 1/5, 1/10, 1/100						
46	Fractions	Finding equivalent fractions						
47	Fractions	Multiplying and dividing to obtain equivalent fractions						
48	Fractions	Reducing fractions to lowest equivalent form						
49	Fractions	Comparing and ordering fractions greater than (>) 1						
50	Sign word problems	Solving Word Problems by recognising Sign Words						
51	Equations	Problem solving strategies						
52	Number problems	Problems with numbers.						
53	Money	Problems involving money						
54	Length	Using the metre as a formal unit to measure perimeter						
55	Length	Using the formal unit of the centimetre to measure length and perimeter						
56	Length	Compare and convert formal units of measurement						
57	Weight/mass	The kilogram						
58	Weight/mass	The gram and net mass						
59	Weight/mass	The tonne – converting units and problems						
60	Capacity	Converting between volume and capacity using millilitres and litres						
61	Capacity	Using the cubic cm and displacement to measure volume and capacity						
62	Capacity	Using the cubic cm as a standard unit of measurement for volume and capacity						
63	Capacity	The relationship between the common units of capacity, the litre and the millilitre						
64	Capacity	Converting between volume and capacity using kilolitres and litres						
65	Capacity	Estimate, measure and compare the capacity of containers						
66	Area	Introduction to the square centimetre.						
67	Area	Introducing the rules for finding the area of a rectangle and a parallelogram.						
68	Area	Finding the area of a triangle and other composite shapes.						
69	Area	Larger areas: square metre, hectare, square kilometre.						
70	Lines and angles	Describing position.						

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71	Lines and angles	Mapping and grid references						
72	Lines and angles	Main and intermediate compass points						
73	Length	Problems with length.						
74	Mass	Problems with mass.						
75	Area	Problems with area.						
76	Volume/capacity	Problems with volume/capacity.						
77	Time, digital, analogue	Comparing analogue and digital time						
78	Time, digital	O'clock and half past using digital time						
79	Time, analogue	O'clock and half past on the analogue clock						
80	Time, 24-hour	24 hour time						
81	Time zones	Time zones						
82	2-D shapes	Recognise and name triangles						
83	2-D shapes	Spatial properties of quadrilaterals						
84	Geometry-quadrilaterals	Quadrilaterals						
85	2-D shapes	Using the prefix to determine polygons						
86	Tessellating 2-D shapes	Use grids to enlarge/reduce 2D shapes						
87	3-D shapes	Recognise and name prisms according to spatial properties						
88	3-D shapes	Recognise and name pyramids according to spatial properties						
89	3-D shapes	Recognise nets for prisms, pyramids, cubes and cones						
90	3-D shapes	Viewing 3-D shapes.						
91	Angles	Measure and classify angles						
92	Geometry-angles	Measuring angles						
93	Data	Pictograms						
94	Data	Bar Charts						
95	Data	Line graphs.						
96	Data	Pie and bar graphs.						
Grade 5 Mathematics			350	6	200	2000	50	50
#	TOPIC	TITLE						
1	Place value	The numbers 1000 to 9999						
2	Counting and numeration	The numbers 10 000 to 99 999						
3	Counting and numeration	Seven digit numbers						
4	Counting and numeration	Addition to 9999 and beyond						
5	Subtraction	Subtraction involving four digit numbers and beyond using the renaming method.						
6	Multiplication	Multiplying 2-digit numbers by multiple of 10						
7	Multiplication	Multiplying 3 and 4-digit numbers by multiples of 100						
8	Multiplication	Multiplying 2-digit numbers by 2-digit numbers						
9	Multiplication	Multiplying 4-digit numbers by 3-digit numbers						
10	Multiplication	Multiplying 4-digit numbers by 4-digit number						
11	Division/repeat subtraction	Repeated subtraction with divisors less than 20 with no remainders						
12	Division/repeat subtraction	Repeated subtraction by multiples of 10 with divisors less than 20 with no remainders						
13	Division/repeat subtraction	Repeated subtraction by multiples of 2, 3 and 4 with divisors greater than 20 with no remainders						
14	Division/repeat subtraction	Repeated subtraction by multiples of 1,2 and 3 with divisors less than 20 with remainders						
15	Division/repeat subtraction	Repeated subtraction by multiples of 10 with divisors less than 20 with remainders						
16	Division/repeat subtraction	Repeated subtraction with divisors greater than 20 with remainders as fractions						
17	Division/repeat subtraction	Repeated subtraction with divisors less than 35 with some remainders						
18	Division/repeat subtraction	Repeated subtraction with divisors less than 55 with dividends of 3 and 4-digits with some remainders						
19	Division/repeat subtraction	Repeated subtraction with divisors greater than 50 with dividends of thousands and some remainders						
20	Division/repeat subtraction	Using divide, multiply and subtraction in the bring down method						
21	Decimals	Multiplying decimals by 10, 100 and 1000						
22	Decimals	Dividing decimals by 10, 100 and 1000						
23	Algebraic expressions	Directed numbers: addition and subtraction.						

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
24	Algebraic expressions	Directed numbers: multiplication and division.						
25	Multiplication	Multiples and factors of whole numbers						
26	Rules properties	Using Order of Operation procedures (BIDMAS) with Fractions						
27	Decimals	Adding decimals to two decimal places						
28	Decimals	Subtracting decimals to two decimal places						
29	Decimals	Using decimals – shopping problems						
30	Decimals	Using decimals to record length						
31	Decimals	Rounding decimals						
32	Decimals	Decimals to three decimal places						
33	Decimals	Adding decimals with a different number of decimal places						
34	Decimals	Subtracting decimals with a different number of places						
35	Fractions	Comparing and ordering fractions						
36	Fractions	mixed numbers (mixed numerals)						
37	Fractions	Improper fractions						
38	Fractions	Fractions 1/5, 1/10, 1/100						
39	Fractions	Finding equivalent fractions						
40	Fractions	Multiplying and dividing to obtain equivalent fractions						
41	Fractions	Reducing fractions to lowest equivalent form						
42	Fractions	Comparing and ordering fractions greater than (>) 1						
43	Fractions	Subtracting fractions from whole numbers						
44	Fractions	Adding and subtracting fractions with the same denominator						
45	Fractions	Adding and subtracting fractions with different denominators						
46	Fractions	Multiplying fractions by whole numbers						
47	Fractions	Fractions of whole numbers						
48	Fractions	Multiplying fractions						
49	Fractions	Multiplying mixed numbers (mixed numerals)						
50	Fractions	Finding reciprocals of fractions and mixed numbers (mixed numerals)						
51	Fractions	Dividing fractions						
52	Fractions	Dividing mixed numbers (mixed numerals)						
53	Length	Compare and convert formal units of measurement						
54	Weight/mass	The kilogram						
55	Weight/mass	The gram and net mass						
56	Weight/mass	The tonne – converting units and problems						
57	Capacity	Using the cubic cm and displacement to measure volume and capacity						
58	Capacity	Using the cubic cm as a standard unit of measurement for volume and capacity						
59	Capacity	The relationship between the common units of capacity, the litre and the millilitre						
60	Capacity	Converting between volume and capacity using kilolitres and litres						
61	Capacity	Estimate, measure and compare the capacity of containers						
62	Area	Introducing the rules for finding the area of a rectangle and a parallelogram.						
63	Area	Finding the area of a triangle and other composite shapes.						
64	Area	Larger areas: square metre, hectare, square kilometre.						
65	Area	Comparing and ordering areas.						
66	Volume	Introduction to volume. using the cubic centimetre as a standard unit						
67	Volume	Using the cubic centimetre to measure volume.						
68	Volume	Introducing the formula for volume.						
69	Volume	Using the cubic metre to measure volume.						
70	Volume	Solving Problems about Volume – Part 1.						
71	Volume	Solving Problems about Volume – Part 2.						
72	Length	Problems with length.						
73	Mass	Problems with mass.						
74	Area	Problems with area.						
75	Volume/capacity	Problems with volume/capacity.						
76	Time, 24-hour	24 hour time						
77	Time zones	Time zones						
78	Lines and angles	Informal coordinate system						
79	2-D shapes	Recognise and name triangles						

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
80	2-D shapes	Spatial properties of quadrilaterals						
81	Geometry-quadrilaterals	Quadrilaterals						
82	Geometry-quadrilaterals	Classifying Quadrilaterals						
83	Geometry-quadrilaterals	Using the Properties of a Parallelogram						
84	Geometry-quadrilaterals	Proving a Shape is a Parallelogram						
85	Geometry-quadrilaterals	Properties of the Rectangle, Square and Rhombus						
86	Geometry-quadrilaterals	Properties of the Trapezium and Kite						
87	Geometry-quadrilaterals	The quadrilateral family and coordinate methods in geometry						
88	2-D shapes	Using the prefix to determine polygons						
89	3-D shapes	Constructing models.						
90	3-D shapes	Recognise and name prisms according to spatial properties						
91	3-D shapes	Recognise and name pyramids according to spatial properties						
92	3-D shapes	Recognise nets for prisms, pyramids, cubes and cones						
93	3-D shapes	Viewing 3-D shapes.						
94	Angles	Measure and classify angles						
95	Geometry-angles	Measuring angles						
96	Data	Pictograms						
97	Data	Bar Charts						
98	Data	Line graphs.						
99	Data	Pie and bar graphs.						
Grade 6 Mathematics			325	6	180	1800	50	50
#	TOPIC	TITLE						
1	Multiplication	Multiplying 2-digit numbers by multiple of 10						
2	Multiplication	Multiplying 3 and 4-digit numbers by multiples of 100						
3	Multiplication	Multiplying 2-digit numbers by 2-digit numbers						
4	Multiplication	Multiplying 4-digit numbers by 3-digit numbers						
5	Multiplication	Multiplying 4-digit numbers by 4-digit number						
6	Division/repeat subtraction	Repeated subtraction with divisors less than 20 with no remainders						
7	Division/repeat subtraction	Repeated subtraction by multiples of 10 with divisors less than 20 with no remainders						
8	Division/repeat subtraction	Repeated subtraction by multiples of 2, 3 and 4 with divisors greater than 20 with no remainders						
9	Division/repeat subtraction	Repeated subtraction by multiples of 1,2 and 3 with divisors less than 20 with remainders						
10	Division/repeat subtraction	Repeated subtraction by multiples of 10 with divisors less than 20 with remainders						
11	Division/repeat subtraction	Repeated subtraction with divisors greater than 20 with remainders as fractions						
12	Division/repeat subtraction	Repeated subtraction with divisors less than 35 with some remainders						
13	Division/repeat subtraction	Repeated subtraction with divisors less than 55 with dividends of 3 and 4-digits with some remainders						
14	Division/repeat subtraction	Repeated subtraction with divisors greater than 50 with dividends of thousands and some remainders						
15	Division/repeat subtraction	Using divide, multiply and subtraction in the bring down method						
16	Decimals	Multiplying decimals by 10, 100 and 1000						
17	Decimals	Dividing decimals by 10, 100 and 1000						
18	Algebraic expressions	Directed numbers: addition and subtraction.						
19	Algebraic expressions	Directed numbers: multiplication and division.						
20	Multiplication	Multiples and factors of whole numbers						
21	Rules properties	Using Order of Operation procedures (BIDMAS) with Fractions						
22	Decimals	Adding decimals to two decimal places						
23	Decimals	Subtracting decimals to two decimal places						
24	Decimals	Using decimals – shopping problems						
25	Decimals	Using decimals to record length						
26	Decimals	Rounding decimals						
27	Decimals	Decimals to three decimal places						
28	Decimals	Adding decimals with a different number of decimal places						

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29	Decimals	Subtracting decimals with a different number of places						
30	Decimals	Multiplying decimals by whole numbers						
31	Decimals	Multiplication of decimals by decimals to two decimal places						
32	Decimals	Dividing decimal fractions by whole numbers						
33	Decimals	Dividing numbers by a decimal fraction						
34	Fractions	Subtracting fractions from whole numbers						
35	Fractions	Adding and subtracting fractions with the same denominator						
36	Fractions	Adding and subtracting fractions with different denominators						
37	Fractions	Multiplying fractions by whole numbers						
38	Fractions	Fractions of whole numbers						
39	Fractions	Multiplying fractions						
40	Fractions	Multiplying mixed numbers (mixed numerals)						
41	Fractions	Finding reciprocals of fractions and mixed numbers (mixed numerals)						
42	Fractions	Dividing fractions						
43	Fractions	Dividing mixed numbers (mixed numerals)						
44	Percentages	Calculating Percentages and Fractions of Quantities						
45	Algebraic expressions	Algebraic expressions.						
46	Algebraic expressions	Simplifying algebraic expressions: adding like terms.						
47	Algebraic expressions	Simplifying algebraic Expressions: subtracting like terms.						
48	Algebraic expressions	Simplifying Algebraic expressions: combining addition and subtraction.						
49	Algebraic expressions	Simplifying algebraic expressions: multiplication						
50	Algebraic expressions	Simplifying algebraic expressions: division						
51	Algebraic equations	Solving equations containing addition and subtraction						
52	Algebraic equations	Solving equations containing multiplication and division						
53	Area	Introducing the rules for finding the area of a rectangle and a parallelogram.						
54	Area	Finding the area of a triangle and other composite shapes.						
55	Area	Larger areas: square metre, hectare, square kilometre.						
56	Area	Comparing and ordering areas.						
57	Area	Area of a trapezium.						
58	Area	Area of a rhombus.						
59	Surface area	Surface area of a cube/rectangular prism.						
60	Surface area	Surface area of a triangular/trapezoidal prism.						
61	Volume	Introducing the formula for volume.						
62	Volume	Using the cubic metre to measure volume.						
63	Volume	Solving Problems about Volume – Part 1.						
64	Volume	Solving Problems about Volume – Part 2.						
65	Volume	Finding the volume of prisms						
66	Geometry-quadrilaterals	Properties of the Rectangle, Square and Rhombus						
67	Geometry-quadrilaterals	Properties of the Trapezium and Kite						
68	Geometry-quadrilaterals	The quadrilateral family and coordinate methods in geometry						
69	Lines and angles	Informal coordinate system						
70	Angles	Measure and classify angles						
71	Geometry-angles	Measuring angles						
72	Statistics	The range.						
73	Statistic-probability	The mode						
74	Statistic-probability	The mean						
75	Statistic-probability	The median						
76	Data	Pie and bar graphs.						
Grade 7 Mathematics			350	6	200	2000	50	50
#	TOPIC	TITLE						
1	Multiplication	Multiplying 4-digit numbers by 3-digit numbers						
2	Multiplication	Multiplying 4-digit numbers by 4-digit number						
3	Division/repeat subtraction	Repeated subtraction with divisors greater than 50 with dividends of thousands and some remainders						
4	Division/repeat subtraction	Using divide, multiply and subtraction in the bring down method						

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5	Decimals	Multiplying decimals by 10, 100 and 1000						
6	Decimals	Dividing decimals by 10, 100 and 1000						
7	Algebraic expressions	Directed numbers: addition and subtraction.						
8	Algebraic expressions	Directed numbers: multiplication and division.						
9	Multiplication	Multiples and factors of whole numbers						
10	Rules properties	Using Order of Operation procedures (BIDMAS) with Fractions						
11	Decimals	Adding decimals with a different number of decimal places						
12	Decimals	Subtracting decimals with a different number of places						
13	Decimals	Multiplying decimals by whole numbers						
14	Decimals	Multiplication of decimals by decimals to two decimal places						
15	Decimals	Dividing decimal fractions by whole numbers						
16	Decimals	Dividing numbers by a decimal fraction						
17	Fractions	Adding and subtracting fractions with different denominators						
18	Fractions	Multiplying fractions by whole numbers						
19	Fractions	Fractions of whole numbers						
20	Fractions	Multiplying fractions						
21	Fractions	Multiplying mixed numbers (mixed numerals)						
22	Fractions	Finding reciprocals of fractions and mixed numbers (mixed numerals)						
23	Fractions	Dividing fractions						
24	Fractions	Dividing mixed numbers (mixed numerals)						
25	Percentages	Calculating Percentages and Fractions of Quantities						
26	Algebraic expressions	Algebraic expressions.						
27	Algebraic expressions	Simplifying algebraic expressions: adding like terms.						
28	Algebraic expressions	Simplifying algebraic Expressions: subtracting like terms.						
29	Algebraic expressions	Simplifying Algebraic expressions: combining addition and subtraction.						
30	Algebraic expressions	Simplifying algebraic expressions: multiplication						
31	Algebraic expressions	Simplifying algebraic expressions: division						
32	Algebraic equations	Solving equations containing addition and subtraction						
33	Algebraic equations	Solving equations containing multiplication and division						
34	Algebraic equations	Solving two step equations						
35	Algebraic equations	Solving equations containing binomial expressions						
36	Algebraic equations	Equations involving grouping symbols.						
37	Algebraic equations	Equations involving fractions.						
38	Absolute value or modulus	Solving for the variable						
39	Algebraic expressions	Substitution into algebraic expressions.						
40	Rules for indices/exponents	Adding indices when multiplying terms with the same base						
41	Rules for indices/exponents	Subtracting indices when dividing terms with the same base						
42	Area	Introducing the rules for finding the area of a rectangle and a parallelogram.						
43	Area	Finding the area of a triangle and other composite shapes.						
44	Area	Larger areas: square metre, hectare, square kilometre.						
45	Area	Comparing and ordering areas.						
46	Area	Area of a trapezium.						
47	Area	Area of a rhombus.						
48	Surface area	Surface area of a cube/rectangular prism.						
49	Surface area	Surface area of a triangular/trapezoidal prism.						
50	Volume	Introducing the formula for volume.						
51	Volume	Using the cubic metre to measure volume.						
52	Volume	Solving Problems about Volume – Part 1.						
53	Volume	Solving Problems about Volume – Part 2.						
54	Volume	Finding the volume of prisms						
55	Geometry-angles	Measuring angles						
56	Geometry-angles	Adjacent angles						
57	Geometry-angles	Complementary and supplementary angles						
58	Geometry-angles	Vertically opposite angles						
59	Geometry-angles	Angles at a Point.						
60	Geometry-angles	Parallel Lines.						
61	Geometry-problems	Additional questions involving parallel lines						
62	Geometry-triangles	Angle sum of a triangle						

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
63	Geometry-triangles	Exterior angle theorem						
64	Geometry-constructions	Geometric constructions						
65	Geometry	To identify collinear points, coplanar lines and points in 2 and 3 dimensions						
66	Geometry-constructions	Angle bisector construction and its properties (Stage 2)						
67	Geometry-constructions	Circumcentre and incentre (Stage 2)						
68	Geometry-constructions	Orthocentre and centroids (Stage 2)						
69	Tessellating 2-D shapes	Use grids to enlarge/reduce 2D shapes						
70	Transformations	Special transformations – reflections, rotations and enlargements.						
71	Translations	Transformations – reflections						
72	Geometric transformations	Geometry transformations without matrices: reflection (Stage 2)						
73	Geometric transformations	Geometry transformations without matrices: translation (Stage 2)						
74	Geometric transformations	Geometry transformations without matrices: rotation (Stage 2)						
75	Geometric transformations	Geometry transformations without matrices: dilation or enlargement (Stage 2)						
76	Geometric transformations	The definition and concept of combined transformations resulting in an equivalent single transformation.						
77	Statistics	The range.						
78	Statistic-probability	The mode						
79	Statistic-probability	The mean						
80	Statistic-probability	The median						
81	Statistic-probability	Calculating the median from a frequency distribution						
82	Statistics – grouped data	Calculating mean, mode and median from grouped data						
83	Statistics – Range and dispersion	Range as a measure of dispersion						
84	Statistics – Spread	Measures of spread						
85	Statistics	Frequency distribution table						
86	Statistics	Relative frequency						
87	Statistic-probability	Probability of Simple Events						
88	Statistic-probability	Rolling a pair of dice						
89	Statistic-probability	Experimental probability						
90	Data	Pie and bar graphs.						
91	Statistics	Frequency histograms and polygons						
Grade 8 Mathematics			350	6	200	2000	50	50
#	TOPIC	TITLE						
1	Algebraic expressions	Directed numbers: addition and subtraction.						
2	Algebraic expressions	Directed numbers: multiplication and division.						
3	Algebra-highest common factor	Highest common factor.						
4	Factors by grouping	Factors by grouping.						
5	Number theory – sets	Number sets and their members						
6	Scientific notation	Scientific notation with larger numbers						
7	Scientific notation	Scientific notation with small numbers						
8	Scientific notation	Changing scientific notation to numerals						
9	Significant figures	Significant figures						
10	Time, distance, speed	Average speed						
11	Decimals	Multiplying decimals by whole numbers						
12	Decimals	Multiplication of decimals by decimals to two decimal places						
13	Decimals	Dividing decimal fractions by whole numbers						
14	Decimals	Dividing numbers by a decimal fraction						
15	Fractions	Multiplying fractions						
16	Fractions	Multiplying mixed numbers (mixed numerals)						
17	Fractions	Finding reciprocals of fractions and mixed numbers (mixed numerals)						
18	Fractions	Dividing fractions						
19	Fractions	Dividing mixed numbers (mixed numerals)						
20	Percentages	Introduction to percentages, including relating common fractions to percentages						
21	Percentages	Changing fractions and decimals to percentages using tenths and hundredths						

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
22	Percentages	Changing percentages to fractions and decimals						
23	Percentages	One quantity as a percentage of another						
24	Algebraic expressions	Algebraic expressions.						
25	Algebraic expressions	Simplifying algebraic expressions: adding like terms.						
26	Algebraic expressions	Simplifying algebraic Expressions: subtracting like terms.						
27	Algebraic expressions	Simplifying Algebraic expressions: combining addition and subtraction.						
28	Algebraic expressions	Simplifying algebraic expressions: multiplication						
29	Algebraic expressions	Simplifying algebraic expressions: division						
30	Algebraic expressions	Expanding algebraic expressions: multiplication						
31	Algebraic expressions	Expanding algebraic expressions: negative multiplier						
32	Algebraic expressions	Expanding and simplifying algebraic expressions						
33	Algebraic equations	Solving equations containing addition and subtraction						
34	Algebraic equations	Solving equations containing multiplication and division						
35	Algebraic equations	Solving two step equations						
36	Algebraic equations	Solving equations containing binomial expressions						
37	Algebraic equations	Equations involving grouping symbols.						
38	Algebraic equations	Equations involving fractions.						
39	Absolute value or modulus	Solving for the variable						
40	Simultaneous equns	Simultaneous equations						
41	Simultaneous equns	Elimination method						
42	Simultaneous equns	Elimination method part 2						
43	Simultaneous equns	Applications of simultaneous equations						
44	Algebra-factorising	Simplifying easy algebraic fractions.						
45	Factorisation	Factorisation of algebraic fractions including binomials.						
46	Factorising	Expansions leading to the difference of two squares						
47	Common fact and diff	Common factor and the difference of two squares						
48	Algebraic expressions	Substitution into algebraic expressions.						
49	Algebra- formulae	Equations resulting from substitution into formulae.						
50	Algebra- formulae	Changing the subject of the formula.						
51	Sequences and Series	General sequences.						
52	Sequences and Series	Finding Tn given Sn.						
53	Arithmetic Progression	The arithmetic progression						
54	Area	Area of a trapezium.						
55	Area	Area of a rhombus.						
56	Area	Area of a circle.						
57	Area	Area of regular polygons and composite figures.						
58	Surface area	Surface area of a cube/rectangular prism.						
59	Surface area	Surface area of a triangular/trapezoidal prism.						
60	Surface area	Surface area of a cylinder and sphere.						
61	Surface area	Surface area of pyramids						
62	Surface area	Surface area of cones						
63	Surface area	Surface area of composite solids						
64	Volume	Finding the volume of prisms						
65	Volume	Volume of a cylinder and sphere.						
66	Volume	Volume of pyramids and cones.						
67	Volume	Composite solids.						
68	Geometry-angles	Adjacent angles						
69	Geometry-angles	Complementary and supplementary angles						
70	Geometry-angles	Vertically opposite angles						
71	Geometry-angles	Angles at a Point.						
72	Geometry-angles	Parallel Lines.						
73	Geometry-problems	Additional questions involving parallel lines						
74	Geometry-triangles	Angle sum of a triangle						
75	Geometry-triangles	Exterior angle theorem						
76	Geometry - angles	To determine angle labelling rules, naming angles according to size, angle bisector properties and related algebra						
77	Geometry problems	More difficult exercises involving parallel lines						
78	Geometry-polygons	Angles of regular polygons						
79	Trigonometry-compass	Bearings - the compass.						
80	Trig complementary angles	Complementary angle results.						
81	Geometry-constructions	Geometric constructions						

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
82	Geometry	To identify collinear points, coplanar lines and points in 2 and 3 dimensions						
83	Geometry-constructions	Angle bisector construction and its properties (Stage 2)						
84	Geometry-constructions	Circumcentre and incentre (Stage 2)						
85	Geometry-constructions	Orthocentre and centroids (Stage 2)						
86	Geometry-locus	Constructions and loci – single condition						
87	Geometry-locus	Constructions and loci – multiple conditions						
88	Transformations	Special transformations – reflections, rotations and enlargements.						
89	Translations	Transformations – reflections						
90	Geometric transformations	Geometry transformations without matrices: reflection (Stage 2)						
91	Geometric transformations	Geometry transformations without matrices: translation (Stage 2)						
92	Geometric transformations	Geometry transformations without matrices: rotation (Stage 2)						
93	Geometric transformations	Geometry transformations without matrices: dilation or enlargement (Stage 2)						
94	Geometric transformations	The definition and concept of combined transformations resulting in an equivalent single transformation.						
95	Pythagoras	Find the hypotenuse						
96	Pythagoras	Pythagorean triples						
97	Pythagoras	Find the hypotenuse Part 2						
98	Pythagoras	Calculating a leg of a right-angled triangle						
99	Pythagoras	Proofs of Pythagoras theorem						
100	Statistics	The range.						
101	Statistic-probability	The mode						
102	Statistic-probability	The mean						
103	Statistic-probability	The median						
104	Statistic-probability	Calculating the median from a frequency distribution						
105	Statistics – grouped data	Calculating mean, mode and median from grouped data						
106	Statistics – Range and dispersion	Range as a measure of dispersion						
107	Statistics – Spread	Measures of spread						
108	Statistics	Frequency distribution table						
109	Statistics	Relative frequency						
110	Statistic-probability	Probability of Simple Events						
111	Statistic-probability	Rolling a pair of dice						
112	Statistic-probability	Experimental probability						
113	Statistic-probability	Tree diagrams – not depending on previous outcomes						
114	Statistic-probability	Tree diagrams – depending on previous outcomes						
115	Statistics	Frequency histograms and polygons						
116	Statistic-probability	Cumulative frequency						
117	Statistics – Interquartile range	Measures of spread: the interquartile range						
118	Statistics	Stem and Leaf Plots along with Box and Whisker Plots						
119	Statistics	Scatter Diagrams						

High School - Number and Quantity Mathematics

#	TOPIC	TITLE	350	6	200	2000	50	50
1	Rules properties	Using Order of Operation procedures (BIDMAS) with Fractions						
2	Number theory – equations	Transformations that produce equivalent equations						
3	Decimals	Multiplying decimals by whole numbers						
4	Decimals	Multiplication of decimals by decimals to two decimal places						
5	Decimals	Dividing decimal fractions by whole numbers						
6	Decimals	Dividing numbers by a decimal fraction						
7	Fractions	Multiplying fractions						
8	Fractions	Multiplying mixed numbers (mixed numerals)						
9	Fractions	Finding reciprocals of fractions and mixed numbers (mixed numerals)						
10	Fractions	Dividing fractions						
11	Fractions	Dividing mixed numbers (mixed numerals)						
12	Percentages	Introduction to percentages, including relating common fractions to percentages						

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
13	Percentages	Changing fractions and decimals to percentages using tenths and hundredths						
14	Percentages	Changing percentages to fractions and decimals						
15	Percentages	One quantity as a percentage of another						
16	Sequences and Series-Compound interest	Compound interest						
17	Scientific notation	Scientific notation with larger numbers						
18	Scientific notation	Scientific notation with small numbers						
19	Scientific notation	Changing scientific notation to numerals						
20	Significant figures	Significant figures						
21	Number theory – sets	Number sets and their members						
22	Number theory – operations	Properties of real numbers using addition and multiplication						
23	Rules for indices/exponents	Adding indices when multiplying terms with the same base						
24	Rules for indices/exponents	Subtracting indices when dividing terms with the same base						
25	Rules for indices/exponents	Multiplying indices when raising a power to a power						
26	Rules for indices/exponents	Multiplying indices when raising to more than one term						
27	Rules for indices/exponents	Terms raised to the power of zero						
28	Rules for indices/exponents	Negative Indices						
29	Fractional indices/exponents	Fractional indices						
30	Fractional indices/exponents	Complex fractions as indices						
31	Exponential function	The exponential function.						
32	Log functions	Logarithmic functions.						
33	Logarithms-Power of 2	Powers of 2.						
34	Logarithms-Equations and logs	Equations of type $\log x$ to the base 3 = 4.						
35	Logarithms-Equations and logs	Equations of type $\log 32$ to the base $x = 5$.						
36	Logarithms-Log laws	Laws of logarithms.						
37	Logarithms-Log laws expansion	Using the log laws to expand logarithmic expressions.						
38	Logarithms-Log laws simplifying	Using the log laws to simplify expressions involving logarithms.						
39	Logarithms-Log laws numbers	Using the log laws to find the logarithms of numbers.						
40	Logarithms-Equations and logs	Equations involving logarithms.						
41	Logarithms-Logs to solve equations	Using logarithms to solve equations.						
42	Logarithms-Change base formula	Change of base formula						
43	Logarithms-Graph-log curve	The graph of the logarithmic curve						
44	Logarithms-Log curves	Working with log curves.						
45	Surds	Introducing surds						
46	Surds	Some rules for the operations with surds						
47	Surds	Simplifying surds						
48	Surds	Creating entire surds						
49	Surds	Adding and subtracting like surds						
50	Surds	Expanding surds						
51	Surds	Conjugate binomials with surds						
52	Surds	Rationalising the denominator						
53	Surds	Rationalising binomial denominators						
54	Graphing roots	Graphing irrational roots						
55	Surds	Binomial expansions						
56	Graphing binomials	Binomial products.						
57	Graphing binomials	Binomial products with negative multiplier						
58	Graphing binomials	Binomial products [non-monic].						
59	Squaring binomial	Squaring a binomial. [monic]						
60	Squaring binomial	Squaring a binomial [non-monic].						
61	Statistic-probability	Binomial Theorem – Pascal's Triangle						
62	Matrices	Basic concepts – Matrices						
63	Matrices	Addition and subtraction of matrices						
64	Matrices	Scalar matrix multiplication						
65	Matrices	Multiplication of one matrix by another matrix						
66	Matrices	Translation in the number plane						
67	Matrices	Translation by matrix multiplication						
68	Simultaneous equations	Number of solutions (Stage 2)						
69	Vectors	2 vector addition in 2 and 3D (stage 2)						
70	Linear systems	Optimal solutions (Stage 2) – Vectors						
71	Linear systems	Linear systems with matrices (Stage 2)						

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
72	Linear systems	Row-echelon form (Stage 2)						
73	Linear systems	Gauss Jordan elimination method (Stage 2)						
74	Vectors	Vectors						
75	Logarithms-Complex numbers	Imaginary numbers and standard form						
76	Logarithms-Complex numbers	Complex numbers – multiplication and division						
77	Logarithms-Complex numbers	Plotting complex number and graphical representation						
78	Logarithms-Complex numbers	Absolute value						
79	Logarithms-Complex numbers	Trigonometric form of a complex number						
80	Logarithms-Complex numbers	Multiplication and division of complex numbers in trig form (Stage 2)						
81	Logarithms-Complex numbers	DeMoivre's theorem (Stage 2)						
82	Logarithms-Complex numbers	The nth root of real and complex numbers (Stage 2)						
83	Logarithms-Complex numbers	Fundamental theorem of algebra (Stage 2)						
High School - Algebra Mathematics			350	6	200	2000	50	50
#	TOPIC	TITLE						
1	Algebraic expressions	Algebraic expressions.						
2	Algebraic expressions	Simplifying algebraic expressions: adding like terms.						
3	Algebraic expressions	Simplifying algebraic Expressions: subtracting like terms.						
4	Algebraic expressions	Simplifying Algebraic expressions: combining addition and subtraction.						
5	Algebraic expressions	Simplifying algebraic expressions: multiplication						
6	Algebraic expressions	Simplifying algebraic expressions: division						
7	Algebraic expressions	Expanding algebraic expressions: multiplication						
8	Algebraic expressions	Expanding algebraic expressions: negative multiplier						
9	Algebraic expressions	Expanding and simplifying algebraic expressions						
10	Algebraic fractions	Simplifying algebraic fractions using the index laws.						
11	Algebra-negative indices	Algebraic fractions resulting in negative indices.						
12	Algebraic fractions-binomial	Cancelling binomial factors in algebraic fractions.						
13	Absolute value or modulus	Simplifying absolute values						
14	Algebraic expressions-products	Products in simplification of algebraic expressions						
15	Algebraic expressions-larger expansions	Algebraic Expressions – Larger expansions.						
16	Algebraic fractions	Simplifying algebraic fractions.						
17	Algebraic equations	Solving equations containing addition and subtraction						
18	Algebraic equations	Solving equations containing multiplication and division						
19	Algebraic equations	Solving two step equations						
20	Algebraic equations	Solving equations containing binomial expressions						
21	Algebraic equations	Equations involving grouping symbols.						
22	Algebraic equations	Equations involving fractions.						
23	Absolute value or modulus	Solving for the variable						
24	Simultaneous equns	Simultaneous equations						
25	Simultaneous equns	Elimination method						
26	Simultaneous equns	Elimination method part 2						
27	Simultaneous equns	Applications of simultaneous equations						
28	Algebra-factorising	Simplifying easy algebraic fractions.						
29	Factorisation	Factorisation of algebraic fractions including binomials.						
30	Factorising	Expansions leading to the difference of two squares						
31	Common fact and diff	Common factor and the difference of two squares						
32	Factorising quads	Factorising quadratic trinomials [monic] – Case 2.						
33	Factorising quads	Factorising quadratic trinomials [monic] – Case 3.						
34	Factorising quads	Factorising quadratic trinomials [monic] – Case 4.						
35	Factorising quads	Factorisation of non-monic quadratic trinomials						
36	Factorising quads	Factorisation of non-monic quadratic trinomials – moon method						
37	Algebraic expressions	Substitution into algebraic expressions.						
38	Algebra- formulae	Equations resulting from substitution into formulae.						
39	Algebra- formulae	Changing the subject of the formula.						
40	Algebra-inequalities	Solving Inequalities.						
41	Absolute value or modulus	Solving and graphing inequalities						
42	Co-ordinate Geometry-Inequalities	Inequalities on the number plane.						
43	Absolute value equations	Absolute value equations						

IRISH CARRICULLAM		HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter	
44	Difference of 2 squares	Difference of two squares						
45	Quadratic trinomials	Quadratic trinomials [monic] - Case 1.						
46	Quadratic equations	Introduction to quadratic equations.						
47	Quadratic equations	Quadratic equations with factorisation.						
48	Quadratic equations	Solving quadratic equations.						
49	Quadratic equations	Completing the square						
50	Quadratic equations	Solving quadratic equations by completing the square						
51	Quadratic equations	The quadratic formula						
52	Quadratic equations	Problem solving with quadratic equations						
53	Quadratic equations	Solving simultaneous quadratic equations graphically						
54	Functions and graphs	Quadratic polynomials of the form $y = ax + bx + c$.						
55	Functions and graphs	Graphing perfect squares: $y = (a-x)$ squared						
56	Coordinate geometry	Solve by graphing						
57	Graphing-polynomials	Graphing complex polynomials: quadratics with no real roots						
58	Graphing-polynomials	General equation of a circle: determine and graph the equation						
59	Graphing-cubic curves	Graphing cubic curves						
60	Graphs, polynomials	Graphs of polynomials						
61	Algebra-polynomials	Introduction to polynomials						
62	Algebra-polynomials	The sum, difference and product of two polynomials.						
63	Algebra-polynomials	Polynomials and long division.						
64	Polynomial equations	Polynomial equations						
65	Factor theorem	The factor theorem						
66	Factor theorem	More on the factor theorem						
67	Factor theorem	Complete factorisations using the factor theorem						
68	Remainder theorem	The remainder theorem.						
69	Remainder theorem	More on remainder theorem						
70	Sum/diff 2 cubes	Sum and difference of two cubes.						
71	Roots quad equations	Sum and product of roots of quadratic equations						
72	Roots quad equations	Sum and product of roots of cubic and quartic equations						
73	Approx roots	Methods of approximating roots						
74	Logic	Inductive and deductive reasoning						
75	Logic	Definition and use of counter examples						
76	Logic	Indirect proofs						
77	Logic	Mathematical induction						
78	Logic	Conditional statements (converse, inverse and contrapositive) (Stage 2)						
79	Sequences and Series	General sequences.						
80	Sequences and Series	Finding T_n given S_n .						
81	Arithmetic Progression	The arithmetic progression						
82	Arithmetic Progression	Finding the position of a term in an A.P.						
83	Arithmetic Progression	Given two terms of A.P., find the sequence.						
84	Arithmetic Progression	Arithmetic means						
85	Arithmetic Progression	The sum to n terms of an A.P.						
86	Geometric Progression	The geometric progression.						
87	Geometric Progression	Finding the position of a term in a G.P.						
88	Geometric Progression	Given two terms of G.P., find the sequence.						
89	Sequences and Series-Geometric means	Geometric means.						
90	Sequences and Series-Sum of gp	The sum to n terms of a G.P.						
91	Sequences and Series-Sigma notation	Sigma notation						
92	Sequences and Series-Sum-infinity	Limiting sum or sum to infinity.						
93	Sequences and Series-Recurring decimal infinity	Recurring decimals and the infinite G.P.						
94	Sequences and Series-Superannuation	Superannuation.						
95	Sequences and Series-Time payments	Time payments.						
96	Sequences and Series	Applications of arithmetic sequences						
High School - Functions Mathematics			350	6	200	2000	50	50

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
#	TOPIC	TITLE						
1	Functions	Definition, domain and range						
2	Functions	Notation and evaluations						
3	Functions	More on domain and range						
4	Functions	Domain and range from graphical representations						
5	Functions	Evaluating and graphing piecewise functions						
6	Functions	Functions combinations						
7	Functions	Composition of functions						
8	Functions	Inverse functions						
9	Functions	Rational functions Part 1						
10	Functions	Rational functions Part 2						
11	Functions	Parametric equations (Stage 2)						
12	Functions	Polynomial addition etc in combining and simplifying functions (Stage 2)						
13	Functions	Parametric functions (Stage 2)						
14	Difference of 2 squares	Difference of two squares						
15	Quadratic trinomials	Quadratic trinomials [monic] - Case 1.						
16	Quadratic equations	Introduction to quadratic equations.						
17	Quadratic equations	Quadratic equations with factorisation.						
18	Quadratic equations	Solving quadratic equations.						
19	Quadratic equations	Completing the square						
20	Quadratic equations	Solving quadratic equations by completing the square						
21	Quadratic equations	The quadratic formula						
22	Quadratic equations	Problem solving with quadratic equations						
23	Quadratic equations	Solving simultaneous quadratic equations graphically						
24	Functions and graphs	Quadratic polynomials of the form $y = ax + bx + c$.						
25	Functions and graphs	Graphing perfect squares: $y=(a-x)$ squared						
26	Coordinate geometry	Solve by graphing						
27	Graphing-polynomials	Graphing complex polynomials: quadratics with no real roots						
28	Graphing-polynomials	General equation of a circle: determine and graph the equation						
29	Graphing-cubic curves	Graphing cubic curves						
30	Graphs, polynomials	Graphs of polynomials						
31	Trig-reciprocal ratios	Reciprocal ratios.						
32	Trig identities	Trigonometric identities						
33	Trig larger angles	Angles of any magnitude						
34	Trig larger angles	Trigonometric ratios of 0° , 90° , 180° , 270° and 360°						
35	Graph sine	Graphing the trigonometric ratios - I Sine curve.						
36	Graph cosine	Graphing the trigonometric ratios - II Cosine curve.						
37	Graphs tan curve	Graphing the trigonometric ratios - III Tangent curve.						
38	Graph reciprocals	Graphing the trigonometric ratios - IV Reciprocal ratios.						
39	Trig larger angles	Using one ratio to find another.						
40	Trig equations	Solving trigonometric equations - Type I.						
41	Trig equations	Solving trigonometric equations - Type II.						
42	Trig equations	Solving trigonometric equations - Type III.						
43	Polar coordinates	Plotting polar coordinates and converting polar to rectangular						
44	Polar coordinates	Converting rectangular coordinates to polar form						
45	Polar coordinates	Write and graph points in polar form with negative vectors (Stage 2)						
46	Trigonometry	$\sin(A+B)$ etc sum and difference identities (Stage 2)						
47	Trigonometry	Double angle formulas (Stage 2)						
48	Trigonometry	Half angle identities (Stage 2)						
49	Trigonometry	t Formulas (Stage 2)						
50	Calculus=1st prin	Differentiation from first principles.						
51	Calculus=1st prin	Differentiation of $y = x$ to the power of n.						
52	Calculus-differential, integ	Meaning of dy over dx - equations of tangents and normals.						
53	Calculus-differential, integ	Function of a function rule, product rule, quotient rule.						
54	Calculus-differential, integ	Increasing, decreasing and stationary functions.						
55	Calculus	First Derivative - turning points and curve sketching						
56	Calculus-2nd derivative	The second derivative - concavity.						
57	Calculus - Curve sketching	Curve sketching						
58	Calculus - Maxima minima	Practical applications of maxima and minima						

IRISH CARRICULLAM			HRS	USD/hr	USD /month	USD /year	Q&A pdf /chapter	HW Help /Chapter
59	Calculus	Limits						
60	Calculus – Integration	Integration – anti-differentiation, primitive function						
61	Calculus – Computation area	Computation of an area						
62	Calculus – Computation volumes	Computation of volumes of revolution						
63	Calculus – Trapezoidal and Simpson's rules	The Trapezium rule and Simpson's rule						
High School - Geometry Mathematics			350	6	200	2000	50	50
#	TOPIC	TITLE						
1	Transformations	Special transformations – reflections, rotations and enlargements.						
2	Translations	Transformations – reflections						
3	Geometric transformations	Geometry transformations without matrices: reflection (Stage 2)						
4	Geometric transformations	Geometry transformations without matrices: translation (Stage 2)						
5	Geometric transformations	Geometry transformations without matrices: rotation (Stage 2)						
6	Geometric transformations	Geometry transformations without matrices: dilation or enlargement (Stage 2)						
7	Geometric transformations	The definition and concept of combined transformations resulting in an equivalent single transformation.						
8	Geometry-quadrilaterals	Midsegments of Triangles						
9	Geometry-congruence	Congruent triangles, Test 1 and 2						
10	Geometry-congruence	Congruent triangles, Test 3 and 4						
11	Geometry-congruence	Proofs and congruent triangles.						
12	Overlapping triangles	Examples involving overlapping triangles						
13	Special triangles	Special triangles						
14	Similar triangles	Similar triangles						
15	Similar triangles	Using similar triangles to calculate lengths						
16	Geometry-constructions	Geometric constructions						
17	Geometry	To identify collinear points, coplanar lines and points in 2 and 3 dimensions						
18	Geometry-constructions	Angle bisector construction and its properties (Stage 2)						
19	Geometry-constructions	Circumcentre and incentre (Stage 2)						
20	Geometry-constructions	Orthocentre and centroids (Stage 2)						
21	Geometry-locus	Constructions and loci – single condition						
22	Geometry-locus	Constructions and loci – multiple conditions						
23	Area	Area of a circle.						
24	Area	Area of regular polygons and composite figures.						
25	Surface area	Surface area of a cube/rectangular prism.						
26	Surface area	Surface area of a triangular/trapezoidal prism.						
27	Surface area	Surface area of a cylinder and sphere.						
28	Surface area	Surface area of pyramids						
29	Surface area	Surface area of cones						
30	Surface area	Surface area of composite solids						
31	Volume	Finding the volume of prisms						
32	Volume	Volume of a cylinder and sphere.						
33	Volume	Volume of pyramids and cones.						
34	Volume	Composite solids.						
35	Geometry – triangles	Triangle inequality theorem						
36	Coordinate Geometry-the plane	Distance formula.						
37	Coordinate Geometry-midpoint, slope	Mid-point formula						
38	Coordinate Geometry-gradient	Gradient						
39	Coordinate Geometry-gradient	Gradient formula.						
40	Coordinate Geometry-straight line	The straight line.						
41	Coordinate Geometry-slope, etc.	Lines through the origin.						
42	Coordinate Geometry-equation of line	General form of a line and the x and y Intercepts.						
43	Coordinate Geometry-intercept	Slope intercept form of a line.						
44	Coordinate Geometry-point slope	Point slope form of a line						
45	Co-ordinate Geometry-Two point formula	Two point formula: equation of a line which joins a pair of points.						

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46	Co-ordinate Geometry-Intercept form	Intercept form of a straight line: find the equation when given x and y						
47	Co-ordinate Geometry-Parallel lines equations	Parallel lines: identify equation of a line parallel to another						
48	Co-ordinate Geometry-Perpendicular lines	Perpendicular lines.						
49	Co-ordinate Geometry-Theorems	Perpendicular distance						
50	Co-ordinate Geometry-Theorems	Line through intersection of two given lines						
51	Co-ordinate Geometry-Theorems	Angles between two lines						
52	Co-ordinate Geometry-Theorems	Internal and external division of an interval						
53	Pythagoras	Find the hypotenuse						
54	Pythagoras	Pythagorean triples						
55	Pythagoras	Find the hypotenuse Part 2						
56	Pythagoras	Calculating a leg of a right-angled triangle						
57	Pythagoras	Proofs of Pythagoras theorem						
58	Trigonometry-ratios	Trigonometric ratios.						
59	Trigonometry-ratios	Using the calculator.						
60	Trigonometry-ratios	Using the trigonometric ratios to find unknown length. [Case 1 Sine].						
61	Trigonometry-ratios	Using the trigonometric ratios to find unknown length. [Case 2 Cosine].						
62	Trigonometry-ratios	Using the trigonometric ratios to find unknown length. [Case 3 Tangent Ratio].						
63	Trigonometry-ratios	Unknown in the denominator. [Case 4].						
64	Trigonometry-elevation	Angles of elevation and depression.						
65	Trigonometry-practical	Trigonometric ratios in practical situations.						
66	Trigonometry-ratios	Using the calculator to find an angle given a trigonometric ratio.						
67	Trigonometry- ratios	Using the trigonometric ratios to find an angle in a right-angled triangle.						
68	Trigonometry-exact ratios	Trigonometric ratios of 30., 45. and 60. – exact ratios.						
69	Trigonometry-cosine rule	The cosine rule to find an unknown side. [Case 1 SAS].						
70	Trigonometry-cosine rule	The cosine rule to find an unknown angle. [Case 2 SSS].						
71	Trigonometry-sine rule	The sine rule to find an unknown side. Case 1.						
72	Trigonometry-sine rule	The sine rule to find an unknown angle. Case 2.						
73	Trigonometry-areas	The area formula						
74	Trig-reciprocal ratios	Reciprocal ratios.						
75	Trig identities	Trigonometric identities						
76	Trig larger angles	Angles of any magnitude						
77	Trig larger angles	Trigonometric ratios of 0°, 90°, 180°, 270° and 360°						
78	Graph sine	Graphing the trigonometric ratios – I Sine curve.						
79	Graph cosine	Graphing the trigonometric ratios – II Cosine curve.						
80	Graphs tan curve	Graphing the trigonometric ratios – III Tangent curve.						
81	Graph reciprocals	Graphing the trigonometric ratios – IV Reciprocal ratios.						
82	Trig larger angles	Using one ratio to find another.						
83	Trig equations	Solving trigonometric equations – Type I.						
84	Trig equations	Solving trigonometric equations – Type II.						
85	Trig equations	Solving trigonometric equations – Type III.						
86	Polar coordinates	Plotting polar coordinates and converting polar to rectangular						
87	Polar coordinates	Converting rectangular coordinates to polar form						
88	Polar coordinates	Write and graph points in polar form with negative vectors (Stage 2)						
89	Trigonometry	Sin(A+B) etc sum and difference identities (Stage 2)						
90	Trigonometry	Double angle formulas (Stage 2)						
91	Trigonometry	Half angle identities (Stage 2)						
92	Trigonometry	t Formulas (Stage 2)						
93	Circle Geometry	Theorem – Equal arcs on circles of equal radii subtend equal angles at the centre. Theorem – Equal angles at the centre of a circle on equal arcs.						
94	Circle Geometry	Theorem – The perpendicular from the centre of a circle to a chord bisects the chord. Theorem – The line from the centre of a circle to the mid-point of the chord is perpendicular to the chord.						
95	Circle Geometry	Theorem – Equal chords in equal circles are equidistant from the centres. Theorem – Chords in a circle which are equidistant from the centre are equal.						

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96	Circle Geometry	Theorem – The angle at the centre of a circle is double the angle at the circumference standing on the same arc.						
97	Circle Geometry	Theorem – Angles in the same segment of a circle are equal.						
98	Circle Geometry	Theorem – The angle of a semi-circle is a right angle.						
99	Circle Geometry	Theorem – The opposite angles of a cyclic quadrilateral are supplementary.						
100	Circle Geometry	Theorem – The exterior angle at a vertex of a cyclic quadrilateral equals the interior opposite angle.						
101	Circle Geometry	Theorem – The tangent to a circle is perpendicular to the radius drawn to it at the point of contact.						
102	Circle Geometry	Theorem – Tangents to a circle from an external point are equal.						
103	Circle Geometry	Theorem – The angle between a tangent and a chord through the point of contact is equal to the angle in the alternate segment.						
104	Circle Geometry-chords	Theorem – The products of the intercepts of two intersecting chords are equal.						
105	Circle Geometry-tangents	Theorem – The square of the length of the tangent from an external point is equal to the product of the intercepts of the secant passing through this point. [Including Alternate Proof]						
106	Circle Geometry-cyclic quads	Theorem – If the opposite angles in a quadrilateral are supplementary then the quadrilateral is cyclic.						
107	Circle Geometry-subtending	Theorem – If an interval subtends equal angles at two points on the same side of it, then the end points of the interval and the two points are concyclic.						
108	Circle Geometry	Theorem – When circles touch, the line of the centres passes through the point of contact.						
109	Circle Geometry-non-collinear	Theorem – Any three non-collinear points lie on a unique circle whose centre is the point of concurrency of the perpendicular bisectors of the intervals joining these points.						
110	Geometry-circles	The equation of a circle: to find radii of circles						
111	Geometry-circles	The semicircle: to select the equation given the semi circle and vice versa						
112	Geometry-parabola	The parabola: to describe properties of a parabola from its equation						
113	Rect.hyperbola	The rectangular hyperbola.						
114	Conic sections	Introduction to conic sections and their general equation						
115	Conic sections	The parabola $x = 4ay$						
116	Conic sections	Circles						
117	Conic sections	Ellipses						
118	Conic sections	Hyperbola						
119	Matrices	Basic concepts – Matrices						
120	Matrices	Addition and subtraction of matrices						
121	Matrices	Scalar matrix multiplication						
122	Matrices	Multiplication of one matrix by another matrix						
123	Matrices	Translation in the number plane						
124	Matrices	Translation by matrix multiplication						
125	Simultaneous equations	Number of solutions (Stage 2)						
126	Vectors	2 vector addition in 2 and 3D (stage 2)						
127	Linear systems	Optimal solutions (Stage 2) – Vectors						
128	Linear systems	Linear systems with matrices (Stage 2)						
129	Linear systems	Row-echelon form (Stage 2)						
130	Linear systems	Gauss Jordan elimination method (Stage 2)						
High School - Statistics and Probability Mathematics			350	6	200	2000	50	50
#	TOPIC	TITLE						
1	Statistics	Frequency distribution table						
2	Statistics	Frequency histograms and polygons						
3	Statistics	Relative frequency						
4	Statistics	The range.						
5	Statistic-probability	The mode						
6	Statistic-probability	The mean						
7	Statistic-probability	The median						

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8	Statistic-probability	Cumulative frequency						
9	Statistic-probability	Calculating the median from a frequency distribution						
10	Statistic-probability	Probability of Simple Events						
11	Statistic-probability	Rolling a pair of dice						
12	Statistic-probability	Experimental probability						
13	Statistic-probability	Tree diagrams – not depending on previous outcomes						
14	Statistic-probability	Tree diagrams – depending on previous outcomes						
15	Statistic-probability	The complementary result ..						
16	Statistic-probability	$P[A \text{ or } B]$ When A and B are both mutually and NOT mutually exclusive						
17	Statistic-probability	Binomial probabilities using the Binomial Theorem						
18	Statistic-probability	Counting techniques and ordered selections – permutations						
19	Statistic-probability	Unordered selections – combinations						
20	Statistics – grouped data	Calculating mean, mode and median from grouped data						
21	Statistics – Range and dispersion	Range as a measure of dispersion						
22	Statistics – Spread	Measures of spread						
23	Statistics – Standard deviation	Standard deviation applications						
24	Statistics – Standard deviation	Normal distribution						
25	Statistics – Interquartile range	Measures of spread: the interquartile range						
26	Statistics	Stem and Leaf Plots along with Box and Whisker Plots						
27	Statistics	Scatter Diagrams						
28	Sequences and Series	General sequences.						
29	Sequences and Series	Finding T_n given S_n .						
30	Arithmetic Progression	The arithmetic progression						
31	Arithmetic Progression	Finding the position of a term in an A.P.						
32	Arithmetic Progression	Given two terms of A.P., find the sequence.						
33	Arithmetic Progression	Arithmetic means						
34	Arithmetic Progression	The sum to n terms of an A.P.						
35	Geometric Progression	The geometric progression.						
36	Geometric Progression	Finding the position of a term in a G.P.						
37	Geometric Progression	Given two terms of G.P., find the sequence.						
38	Sequences and Series-Geometric means	Geometric means.						
39	Sequences and Series-Sum of gp	The sum to n terms of a G.P.						
40	Sequences and Series-Sigma notation	Sigma notation						
41	Sequences and Series-Sum-infinity	Limiting sum or sum to infinity.						
42	Sequences and Series-Recurring decimal infinity	Recurring decimals and the infinite G.P.						
43	Sequences and Series-Superannuation	Superannuation.						
44	Sequences and Series-Time payments	Time payments.						
45	Sequences and Series	Applications of arithmetic sequences						