	Topic	Learning Objective	HPL	Galore Park 2 Page	Galore Park 2 Exercise	Additional Resources	Support	Extend	Key Questions
Year 7 Autumn Term									
Weeks 1 -2	**Decimals**	**GP2 Chapter 6**					**GP1 Chapter 8 & 14**		
	Worded problems 4 ops - Singapore bar modelling	Look at the first page of CE non-calc	Realising (Speed & Accuracy)	106-108, 112	Ex 6.1, 6.2, 6.5	CE Level 2 Non Calc first pages	CE Level 1	CE Level 3	Using 4 operations with money
	Mulipying by a decimal	Link this with estimating	Linking (find connections)	108-109	Ex 6.3	Does multipying always make something bigger?	GP1 p219-	Ex 6.4	2.64 x 0.4
	Dividing by a decimal	Link to fractions (eg 1/2 - 0.5)	Linking (abstraction)	113-115	Ex 6.8	**Maths pad tools**	Divide a decimal first	Ex 6.9	2.64 ÷ 0.4
Weeks 1 - 2	**Prime Numbers & Factors**	**GP2 Chapter 2**					**GP1 Chapter 5**		
Revision	Prime Numbers & divisibility rules	Understand rules of divisibility and apply to find prime numbers; know prime numbers up to 50	Realising (automatic)	32	Ex. 2.1		GP1 Chapter 5		Is 51 a Prime Number?
	Product of Prime Factors	Write as the Product of Prime Factors	Linking (generalisation)	35	Ex. 2.2		GP1 Ex 5.7 and 5.8		Write 315 as the product of prime factors
	HCF and LCM	Find HCF and LCM by using Prime Factors and Venn Diagrams	Analysing (Precision)	37	Ex. 2.3		GP1 Ex 5.9 and 5.10		Find the HCF and the LCM of 315 and 210
Revision	Square, cube triangle numbers	Recognise and extend sequences of these numbers	Agile (enquiring)	38	Ex.2.4 & 2.5		GP1 Chapter 5	Also page 224, Ex. 11.7 in Algebra chapter	a) Name a square number that is also a cube number. b) Write down the 5th triangle number
Extension	Square Roots	Find Square Roots using Prime Factors	Meta-Thinking (Meta Cognition)	49	Ex. 2.10		GP1 Chapter 5	Find Cube Roots using Prime Factors	Using prime factors prove that 576 is a square number
Weeks 3 - 6 (one week French Trip)	**Fractions**	**GP2 Chapter 3**		*It is worth using the calculator for some of these questions to practice using the fraction button*			**GP1 Chapter 7**		
Revision	Equivalent fractions	Find and use equivalent fractions; use to cancel down or simplify	Hard working (Practice)	54	Ex 3.1			Equivalent Fraction dominoes WS p72	Which is larger: 4/9 or 5/12?
	Equivalent fractions, decimals and percentages	Understand how to convert between equivalent FDP and recognise common FDP	Linking (generalisation)	56	Ex 3.2			FDP dominoes GP3	write 0.65 as a fraction and %
Revision	Mixed & Improper Fractions	Converting Between Mixed numbers and improper fractions	Realising (automatic)	58	Ex 3.3				Which fraction is closer to 3: 15/6 or 3 1/3?
Revision	Add & Subtract fractions	Add and Subtract fractions less than one whole	Realising (speed & accuracy)	59 & 61	Ex 3.4 & 3.5 (first half of ex)				2/5 - 1/7 =
	Addition with mixed numbers	Add fractions greater than one whole	Analysing (precision)	60	Ex 3.4 (second half)				3 3/4 + 3 2/3 =
	Subtracting with mixed numbers	Subtract fractions greater than one whole	Analysing (precision)	61	Ex 3.5				5 1/6 - 1 5/8 =
	Worded fraction questions	Apply addition and subtraction to worded questions involving fractions	Linking (generalisation)	62	Ex 3.6				I eat 1/4 of a pizza and my brother eats 2/3 of the same pizza. What fraction of the pizza remains?
Revision	Fraction of an amount	Find fractions of amounts by division and multiplication; then link the "of" to multiplying a fraction and a whole number	Agile (flexible thought process)	63	Ex 3.7			Green Robson p31	5/34 of 306 =
	Multiplying fractions	Multiplying a fraction by a fraction; learn the rules and cross cancelling first	Hard working (Practice)	65	Ex 3.8				2/3 x 6/7 x 14/15 =
	Dividing fractions	Divide a fraction by a fraction; learn the rules	Linking (generalisation)	66	Ex 3.10				4/5 ÷ 7/10 =
	Muliply and Divide Worded Problems	Solve worded problems using proportional reasoning	Hard working (perseverance)	Use WS		Fractions wordy pages			If a horse eats 3/5 of a bale of hay in one week, how long will it take the horse to eat 15 bales of hay?
Extension	What a fraction calculation means	Link to FDP and division, writing calculations in different ways	Creating (flexible thinking)	67	Ex 3.9				Write 4 x 1/2 in as many different but equivalent calculations as possible
Extension	Mixed operations with fractions	Apply rules of BIDMAS	Linking (connection finding)	68	Ex 3.11			Ex 3.13	1/4 + 2/3 x 4/5
	Worded questions with units of measurement	Use all 4 operations to solve word problems	Analysing (logical thinking)	68	Ex 3.12				My car journey takes half an hour. One fifth of the journey is spent in a traffic jam. What fraction of an hour is spent in the traffic jam?
7S extension work GP3	Fractions on calculator			60	Ex 3.14				
	Summary exercise			64	Ex 3.16				
Weeks 7 - 8	**Algebra: Expressions**	**GP2 Chapter 7**					**GP1 Chapter 12**		
Revision	Negative Numbers	Be able to work with the 4 operations and negatives: when add and subtract, picture a number line (where do I start, where am I going)	Realising	131-135	Ex 7.7-Ex. 7.10		GP1 Chapter 11 p177-181		-6 + 4 =
Revision	Rules of written algebra	Use rules of written algebra to write simple expressions	Linking			https://app.mymaths.co.uk/1691-homework/rules-and-formulae	GP1 Chapter 12		True or false: 2a = a x a

	Simplify by collecting like terms	Add and subtract like terms by understanding the components of an expression	Analysing	125	Ex. 7.1		GP1 Chapter 12		3d - 5 - 2c - d + 2 =
	Index Numbers	Multiply like terms to create powers of a term; link this to square and cubes etc.	Linking	126	Ex. 7.2				2a x 3a
	Simplify by multiplying or dividing terms	Multiply and Divide terms in an expression by understanding coefficients and powers	Analysing	127	Ex 7.3 and Ex 7.4				True or false: 3b x 2b = 10b/2
	Substitution	Substitute positive and negative values into expressions, understanding the rules of written algebra	Linking	136	Ex. 7.11			Ex. 7.15	If a = 2 and b = -3, find the value of 3a - 2b
		Substitute integers and decimal values into formulae	Analysing	137	Ex. 7.12				If a = 1/2 and b = 0.25, find the value of 3a - 2b
	Write expressions and formula	Write an expression or a formula from a worded situation	Agile	138	Ex. 7.13		GP1 Chapter 12	Ex. 7.14	Write an expression for the perimeter of a rectangle (P) if the length is x and the width is y.
7S extension work GP3	Substituting (more tricky)			181	Ex 9.2				
	Substituting into area formulea			184	Ex 9.3				
	Finding unknown quantity			185	Ex 9.4				
Half Term									
Weeks 8 - 9	**Algebra: Brackets and Equations**	**GP2 Chapter 11**	This chapter has lots of new material						
	Expand brackets	Expand brackets remembering to multiply both terms	Hardworking	216	Ex 11.1 / 11.2				4(2 - 3x)
	Expand brackets and simplify	Multiply out more complex expressions with brackets (also with negative signs) and then simplify	Analysing	217	Ex 11.3/ 11.4				3x + 5(2+3x) AND 2(3-x) - (6-2x)
	Factorise	Look for HCF to factorise expressions over 2 terms	Linking	219	Ex 11.5			To 3 terms and index terms	Factorise 8pq+16p^2
Revision	Solve equations	Solve one-step and two-step equations, when the solution can be a negative value	Realising	222	Ex 11.6		GP1 Chapter 12		negative unknown 7=8-2b
	Solving equations with x^2		Linking	225	Ex 11.8				x^2 = 0.16
	Equations with brackets	Solve equations with brackets by either expanding brackets first or by dividing by the coefficient of the bracket	Linking	225	Ex 11.9			Ex. 11.11	2(x-1) + 3(x-4) = 1
	Fractions and equations	Solve equations involving a fraction (ie some form of division)	Analysing	228	Ex. 11.10			Ex. 11.13	(2x+4)/5 = 2
	Write equations	Write and solve an equation from a worded problem.	Agile	229	Ex 11.12		GP1 Chapter 12		A rectangle's length is x cm longer than the width. The width is 5 cm. The area of the rectangle is 60 cm^2. Write an equation and solve to find x.
7S extension work GP3	Expanding quadratics			296	Ex 14.4				
	Expanding squares			297	Ex 14.5				
	Factorising			299	Ex 14.6				
	Difference of 2 squares			299	Ex 14.7				
	Factorising difference of 2 squares			300	Ex 14.8				
Week 9	**Assessment**	**(Non-Calc) during lessons**							
Week 9 - 11	**Percentages**	**GP2 Chapter 9**	A good chapter to use the calculator with				**GP1 Chapter 17**		
Revision	Fractions, decimals and percentages	Use rules of conversion to find equivalent FD and P	Realising	173	Ex 9.1				What is 43% as a decimal and a fraction
	A percentage of an amount	Find a percentage amount by relating it to a fraction calculation	Linking	174	Ex 9.2				12% of 12 m
		Find a percentage amount by relating it to a decimal calculation and USE a CALCULATOR	Linking	176	Ex 9.3			Ex. 9.7	3% of 9.5 kg
		Apply finding % amounts to worded problems	Analysing	177	Ex 9.4			Ex. 9.7	
	Write as a percentage	By using a fraction multiplication, write one amount as a percentage of another: or find the percentage given two amounts	Analysing	178	Ex 9.5				Write 45 out of 60 as a %
	% Profit and Loss	Extend understanding of writing a percentage to include the terms profit, loss and cost price	Linking	180	Ex. 9.6				I buy a book for £5 and sell it for £4. What is my % loss?
	% Increase and Decrease	Find the new total from a worded problem, given a % increase or decrease	Meta-thinking	181	Ex. 9.6 q. 8 onwards				In a sale, all prices are reduced by 20%. What would be the sale cost of an item originally costing £64?
7S extension work GP3	Percentage change			105	Ex 5.5				Bill was £52.50, after VAT £67.86. What was the % VAT?
	Finding the original amount			106	Ex 5.6 / 5.7				
	Compund interest			108	Ex 5.8				
Week 11 - end	**Area**	**GP2 Chapter 13**					**GP1 Chapter 17**		
	The parallelogram	Find the area of a parallelogram by using formula b x ph	Analysing	253	Ex. 13.3			Ex. 13.4	From a diagram make sure the perpendicular height is used, not an edge length.
	The triangle	Find the area of a triangle using formula 1/2 x b x ph	Linking	256	Ex 13.5 - 13.7	Worksheet from Galore		Ex. 13.8 Find height given area and base	From a diagram make sure the perpendicular height is used, not an edge length.
Extension	The trapezium	Find the area of a trapezium using the formula 1/2 x h x (a+b)	Agile	261	Ex 13.9				

Not bottom set	Area of a kite, a rhombus and other quadrilaterals	Look at properties of diagonals and use to find area	Linking	264	Ex. 13.10				
Extension	Units of area		Agile	266	Ex 13.11				What is 1 square metre in square cm?
7S extension work GP3	Pythagoras								
	Finding the hypotenuse			205	Ex 10.2 / 10.3				
	Finding not the hypotenuse			209	Ex 10.4 / 10.5				
	Isosceles triangles			212	Ex 10.6				
	Pythagorean Triplets			215	Ex 10.7 / 10.8				
	Mixed problems			217	10.9 / 10.11				
Last week	**Christmas Area Activities and Puzzles**								
	Xmas Cards based on area of shapes/images		Realising						
	Tangram square		Analysing	251	Ex 13.1/13.2				
END OF TERM									