ENGLISH MATHEMATICS _2021 WEEKLY TEACHING PLAN _ GRADE 8

topic hrs hrs Metricition Revision of GRADE 7 WHOLE NUMBERS INTEGERS CoMMON FRACTIONS Integers WORK Calculations using whole numbers restinating and using calculators whole numbers, estimating and using calculators where appropriate INTEGERS FORMAL ASSESMENT TASK Calculations with fractions Calculations with integers • Wolk Calculations using all four operations on whole numbers, estimating and using calculators where appropriate • Revise • Whole numbers • Whole numbers • Uvide whole numbers and common fractions by common fractions • Multiply all four operations with integers • Use a range of strategies to perform and check written and mental calculation • Perform calculations involving all four operations with numbers including; • Perform calculations with whole numbers including; • Divide whole numbers and common fractions • Multiply ecolustors with whole numbers including; • Whole numbers including; • Whole numbers including; • Whole numbers including; • Use knowledge of reciprocal relationships to divide common fractions • With to commentative, associative and distributive properises of addition and multiplicative inverses for integers • Use knowledge of reciprocal relationships to divide common fractions and multiplicative and distributive properises of addition and multiplicative inverses for integers • Calculate amounts if given percentage increase or decrease • Use solving problems • Derive Audits and USC of whole numbers, by inspection or factoristaion	TERM 1	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	i	Week 7	w	leek 8	
veek 2.5 ms 4.5 ms <th></th> <th>3 days</th> <th>5 days</th> <th>5 days</th> <th>5 days</th> <th>5 days</th> <th>5 days</th> <th></th> <th>5 days</th> <th>5</th> <th>days</th>		3 days	5 days	5 days	5 days	5 days	5 days		5 days	5	days	
topic hrs hrs Method Revision of GRADE 7 WHOLE NUMBERS INTEGERS Common Factors Common Factors Calculations using whole numbers INTEGERS Common Factors Calculations using whole numbers Revise: Calculations using all four operations on whole numbers, estimating and using calculators where appropriate Revise Nulliply and divide with integers Whole numbers Divide whole numbers and common fractions by common fractions Integers Multiply and divide vintintegers calculators where appropriate Perform calculations with integers Whole numbers including: Whole numbers including: Divide whole numbers and common fractions by common fractions Integers Vertice, common fractions Use a range of strategies to perform and check written and mential calculations with whole numbers including: Perform calculations with whole numbers including: Perform calculations with numbers factors of integers Properties of integers Vertice and multiplicative and distributive properties of addition and multiplicative inverses for integers Veconties and use commentative, associative and multiplicative inverses for integers Veconties of numbers in contexts involving common fractions and mittiplicative whole numbers, by inspection or factors and numbers, by inspection or factors and numbers, by inspection or factors and numbers, by inspection or factors and numbers including common fractions and mittiplicative involving Solving problems Solve problem	-	2.5 hrs	4.5 hrs	4.5 hrs	4.5 hrs 4.5 hrs		4.5 hrs		4.5 hrs	4.	1.5 hrs	
GRADE 7 WORK Calculations using whole numbers Revise: Calculations with integers Revise: Assessment TASK Calculations with fractions Calculations with fractions Calculations with integers • Revise: • Revise: - addition and subtraction operations on whole numbers, estimating and using calculators where appropriate • Revise • Whole numbers • Whole numbers • Divide whole numbers and common fractions by common fractions • Multiply and divide with integers • Use a range of strategies to perform and check written and mental calculations with integers • Multiply and divide with integers • Integers • Integers • Calculations and solving problems • Calculations and solving problems • Long division concepts, skills and values • Long division • Using a calculator • Recognize and use additive and distributive properties of addition and multiplicative inverses for integers • Recognize and use additive and multiplicative inverses for integers • Calculate amounts if given percentage • Using calculate of whole numbers, by inspection or factorisation • Using calculator • Calculate amounts if given percentage increase or decrease • Using calculator	-	2.5 hrs.	91	nrs.	9	hrs.	2 hrs.		4.5 hrs	2 hrs	2.5 hi	
Solving problems Revise: • Solve problems involving whole numbers, including: • Solve problems in contexts involving percentages • Comparing two or more quantities of the same kind (ratio) • Comparing two quantities of different kinds (rate) • Solve problems in contexts • Sharing in a given ratio where the whole is given • Solve problems in contexts • • Extend to increasing or decreasing of a number in a given ratio • Image: Solve problems in contexts •	Topic, concepts, skills and	GRADE 7	Calculations usi numbers Revise: Calculations on estimating an calculators with Calculation tech Use a range of perform and of mental calcula numbers inclu - Estimation - Adding, su multiplying - Long divis - Rounding compensa - Using a ca Multiples and far Revise: Prime factors least 3-digit with - LCM and HCH numbers, by ithe factorisation Solving problem Revise: Solve problem numbers, incl - Comparin quantities (ratio) - Comparin of different - Sharing in where the - Extend to incr decreasing of	ng whole using all four whole numbers, d using here appropriate of strategies to check written and ations with whole uding: h ubtracting and g in columns sion off and ating alculator ctors of numbers to at whole numbers F of whole nspection or ns ins involving whole uding: g two or more of the same kind g two quantities it kinds (rate) a given ratio whole is given reasing or	 Calculations wi Revise addition a with integ Multiply and Perform calcall four operationall four operation of all four operation of integers Properties of in Recognise and commutative and distributi addition and integers Recognize and and multiplication 	th integers and subtraction gers divide with integers ulations involving ations with integers ulations involving ations with t involve squares, re roots and cube gers tegers nd use a associative ive properties of multiplication for	ASSESMENT TASK ASSIGNMENT • Whole numbers	 Div frac Cal squ con Cal Cal Cal Cal Use rela frac Percer Cal Percer Solving Sol sha who Sol 	ations with fractions by common culate the square ide whole number culate the square inform fractions culate amounts centage increas culations and so ation technique e knowledge of r ationships to divi- ctions ntage culate amounts centage increas g problems ve problems in of colving common fractions aring and finding oble numbers ve problems in of aring and finding oble numbers ve problems in of aring and finding oble numbers	ctions ers and common on fractions res, cubes, ube roots of if given se or decrease olving problems es reciprocal ide common if given se or decrease	square of decir • Use kno to estim decima before	

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hrs	1.5 hrs.	2 hrs	3 hrs.				
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timate the nal places re performi rounding of	of place value number of in the result ng calculations ff and a eck results						

	 Solve problems that involve whole numbers, percentages and decimal fractions in financial contexts such as: Multiplication of whole numbers to at least 12 × 12 Order and compare prime numbers to at least 100 Calculations using all four operations on whole numbers, Count forwards and backwards in integers for any interval Recognise, order and compare integers Add and subtract with integers Recognise and use 	 Addition and subtraction to fractions where one denominator is not a multiple of the other Multiplication of common fractions, including mixed numbers, not limited to fractions where one Count forwards and backwards in decimals Compare and order decimal fractions Rounding off decimal fractions
Prerequis ite skill/ pre- knowledg e	 estimating and using calculators where appropriate Prime factors of numbers to at least 3-digit whole numbers LCM and HCF of numbers to at least 3-digit whole numbers, by inspection or factorisation Solve problems involving whole numbers, including: Comparing two or more quantities of the same kind (ratio) Comparing two quantities of different kinds (rate) Sharing in a given ratio where the whole is given 	 Addition and subtraction of decimal fractions of at least three decimal places Use knowledge of multiples and factors to write fractions in the simplest form before or after calculations Use knowledge of equivalent fractions to add and subtract common fractions in order to perform calculations with them Calculate the percentage of part of a whole Calculate percentage increase or decrease of whole numbers Calculate percentage increase or decrease of whole numbers Calculate percentage increase or decrease of whole numbers

TERM 2	Week 1 4 days		Veek 2 5 days	Week 3 3 days	Week 4 5 days		Week 6 5 days	Weel 5 day		Week 8	Week 9	Week 10 4 days	Week 11 5 days
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week Hours per	3.5 hrs.	1.5 hrs.	3 hrs		́∣s. hrs		9 hrs.		2.5 hrs. 4.5 hrs		4.5 hrs.	3.5 hrs.	4.5 hrs
topic								2 hrs.					
Topic, concepts, skills and values	 DECIMAL FRACT Calculations with dea fractions Revise Multiplication of fractions by dea fractions by dea fractions of deca fractions Division of deca fractions Calculate the s cubes, square cube roots of d fractions Solving problems Solve problems in involving decimal 	cimal f decimal cimal nited to ace imal cimal cimal squares, roots and lecimal	 Comparing an numbers in exponentia Revise compensation exponentia Compare a integers in Compare a numbers in notation, lir exponents Calculations u in exponential Establish g exponents, a^m × aⁿ a^m ÷ aⁿ (a^m)ⁿ = 	cponentia a pare and b vhole nur b form and represent c scientific n ited to p c a meral lar c a meral c a meral c a meral c a meral c a a meral c a a meral c a a meral c a a a meral c a a a a meral c a a a a meral c a a a a a meral c a a a a a a a a a a	al form al form d nbers in sent tial form sent bositive mbers ws of c: if $m > n$ t^n the mbers and ots serations volve iare and rs es, cube nbers	diagram for - not limited involving a difference - of learner's - represente	RNS extend patterns gate and extend eometric g for etween ding patterns: d in physical or rm to sequences constant or ratio a own creation d in tables gate and extend eometric g for etween ding patterns gebraically justify the or observed etween m words or in uage	FORMAL ASSESSMENT TASK INVESTIG ATION • Exponents • Patterns	 RELA Input and out Revise, devalues, our rules for prelationshipher in tables formu Extend devalues, our rules for prelationshipher in tables Revise devalues, our rules for prelationshipher in tables Revise devalues, our rules for prelationshipher in tables Revise devalues, our rules for presented verbalions in flow in tables by form by form by form by form by nur 	etermine input uput values or patterns and ips using: iagrams lae etermine input uput values or patterns and ips using brms etermine, interpret v equivalence of lescriptions of the tionship or rule t: ly v diagrams es	 ALGEBRAIC EXPRESSIONS Algebraic language Recognize and identify conventions for writing algebraic expressions Identify and classify like and unlike terms in algebraic expressions Recognize and identify coefficients and exponents in algebraic expressions Expand and simplify algebraic expressions Use commutative, associative and distributive laws for rational numbers and laws o exponents to: Add and subtract like terms in algebraic expressions For the second state of the second stat	ASSESN T All Term	RMAL IENT TASK EST I and Term 2 opics
Prerequis ite skill/ pre-	 Count forwards an backwards in decir 		whole num exponentia	bers in		numeric and go patterns lookin	eometric		output val	ues or rules for and relationships	rules or relationships represented in symbolic form		

knowledg e	 Compare and order decimal fractions Rounding off decimal fractions Addition and subtraction of decimal fractions of at least three decimal places Multiplication of decimal fractions by whole numbers and decimals Division of decimal fractions by whole numbers Use knowledge of Place value to estimate the number of decimal places in the result before performing calculations Use rounding off and a calculator to check results where appropriate 	 a × a × for b number of factors Recognise and use the appropriate laws of operations with numbers involving exponents and square and cube roots Perform calculations involving all four operations using numbers in exponential form, limited to exponents up to 5, and square and cube roots Solve problems in contexts involving numbers in exponential form 	 relationships between numbers, including patterns: represented in physical or diagram form not limited to sequences involving a constant difference or ratio of learner's own creation represented in tables Describe and justify the general rules for observed relationships between numbers in own words 	 flow diagrams tables formulae Determine, interpret and justify equivalence of different descriptions of the same relationship or rule presented: verbally in flow diagrams in tables by formulae by number sentences
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Identify variables and constants in given formulae and/or equations	

TERM 3	Week 1 4 days	Week 2 5 days	Week 3 5 days	Week 4 5 days	Week 5 4 days	Week 6 5 days		Veek 7 5 days	Wee 5 da
Hours per week	3.5 hrs.	4.5 hrs.			3.5 hrs.				4.5 hrs.
Hours per	3.5 hrs.	4.5 hrs.	7 hrs.	2 hrs	3.5 hrs.	4.5 hrs	1 hr.	3.5 hrs	4.5 hrs.
-	ALGEBRAIC Expand and simplif expressions Use commutative distributive laws f and laws o expor Add and subtract expressions Multiply integers – monomials – binomials – trinomials Divide the followi monomials: – monomials – binomials – binomials	EXPRESSIONS y algebraic e, associative and or rational numbers nents to: like terms in algebraic and monomials by: ng by integers or c expressions ve operations quares, cubes, cube roots of single or like algebraic	ALGEBRAIC Equations • Use substitution in tables of ordered p • Extend solving equ	EQUATIONS equations to generate airs uations to include: and multiplicative	GEOMETR Angle relations • Recognize a formed by: - perpend - intersec - parallel Solving problem • Solve geome	RY OF STRAIGHT LINE ships and describe pairs of an licular lines ting lines lines cut by a transversa ms etric problems using the s between pairs of angle	E S gles al	GEOMETR GEOMETR Classifying Identify triangles distingu betweer - equ - isos - righ Constru PROVIDE L CONSTRUE INVESTIGA TRIANGLE Investigatin figures - Investigatin figures - Investigatin figures - Investigatin focusing - the triar - the - treet - squ - the - trap - kite Constru	Y OF 2D S g 2D shape and write of s in terms of ishing illateral tria sceles trian it-angled tri uctions EARNERS CTED FIGH S ng propert gate the an g on: sum of the ngle sides and l sceles trian g 2D shape and write of terals in te distinguish n: allelogram tangle are mbus bezium
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eek 8	Week 9	Week 10	Week 11
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				 Investigating properties of geometric figures Investigate sides and angles in quadrilaterals, focusing on: the sum of the interior angles of quadrilaterals the sides and opposite angles of parallelograms Solving problems Solve geometric problems involving unknown sides and angles in triangles and quadrilaterals, using known properties and definitions. Similar and congruent 2D shapes Identify and describe the properties of congruent shapes Identify and describe the properties of similar shapes Solve geometric problems involving unknown sides and angles in triangles and quadrilaterals, using known properties and definitions. 	
Prerequis ite skill/ pre- knowledg e	 Recognize and interpret rules or relationships represented in symbolic form Identify variables and constants in given formulae and/or equations 	 Write number sentences to describe problem situations Analyse and interpret number sentences that describe a given situation Solve and complete number sentences by: inspection trial and improvement Determine the numerical value of an expression by substitution. Identify variables and constants in given formulae or equations 	 Definitions of: Line segment Ray Straight lines Parallel lines Perpendicular lines 	 quadrilaterals, using known properties and definitions. Describe, sort, name and compare triangles according to their sides and angles, focusing on: equilateral triangles isosceles triangles right-angled triangles Describe, sort, name and compare quadrilaterals in terms of: length of sides parallel and perpendicular sides size of angles (right-angles or not) Describe and name parts of a circle Recognize and describe similar and congruent figures by comparing: shape size 	

N.B. BY THE END OF TERM 3, LEARNERS SHOULD HAVE COMPLETED A PROJECT AND A TEST. SEE NOTES ON PROJECT FROM ABRIDGED SECTION 4 OF CAPS.

TERM 4	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
	4 days	5 days	5 days	5 days	5 days	5 days	5 days	5 days	5 days	3 days
Hours per week	3.5 hrs.	4.5 hrs.	4.5 hrs.	4.5 hrs.	4.5 hrs.	4.5 hrs.	4.5 hrs.	4.5 hrs.	4.5 hrs.	3 hrs.
Hours per topic		8 hrs.	4.5 hrs.		4.5.hrs	4.5 hrs.	4.5 hrs	4.5 hrs.	7.5	hrs
GRAPHS Interpreting graphs • Revise: Analyse and interpret global graphs of problem situations, with special focus on the following trends and features: - linear or non-linear - constant, increasing or decreasing • Analyse and interpret global graphs of problem situations, with a special focus on the following trends and features: - maximum or minimum - discrete or continuous Drawing graphs • Draw global graphs from given descriptions of a problem situation, identifying features listed above • Use tables or ordered pairs to plot points and draw graphs on the Cartesian plane • Analyse and interpret global		GRAPHS TRANSFORMATION GEOMETRY THEOREM OF PYTHAGORAS Revise: Analyse and interpret global graphs of problem situations, with special focus on he following trends and features: - Recognize, describe and perform transformations with points on a coordinate plane, focusing on: - Investigate the relationship between the lengths of the sides of a right angled triangle to develop the the sides of a right across quadrants - Investigate the relationship between the lengths of the sides of a right angled triangle to develop the the coordinate plane, focusing on the coordinate plane, focus when: - Investigate the relationship between the lengths of the sides of a right angled triangle or not if the lengths of the sides of a right angled triangle or not if the lengths of the sides of the triangle is right angled triangle or not if the lengths of the sides of the triangle is the coordinate glane, focus when: - Investigate the relationship between the lengths of the sides of a right angled triangle or not if the lengths of the sides of the triangle is the coordinate glane, focus when: - Investigate the relationship between the coordinate glane, focus when: - maximum or minimum - reflecting a triangle within and across quadrants - Use the Theorem of Pythagoras to callet the missing length in a right-angled triangle, leaving irration answers in surd form. - Draw global graphs from given descriptions of a problem situation, identifying features isted above Jse tables or ordered pairs to plot on the cono		 Develop and use the Theorem of Pythagoras Investigate the relationship between the lengths of the sides of a right-angled triangle to develop the Theorem of Pythagoras Determine whether a triangle is right-angled triangle or not if the lengths of the three sides of the triangle is known Use the Theorem of Pythagoras to calculate the missing length in a right-angled triangle, leaving irrational 	AREA AND PEI SHA Area and perimeter Use appropriate calculate perime circles Calculate the an at least 2 decime decomposing the and/or triangles Use and describetween the rad circumference of calculations Use and describetween the rad circle in calculate between the rad circle in calculate Solve problems calculator, invol area of polygon least 2 decimal Use and describetween circle in calculate Solve problems calculator, invol area of polygon least 2 decimal Use and describetween calculations invol area of polygon least 2 decimal Use and describetween calculations invol area of polygon least 2 decimal	REVISION OF TERM 3 AND 4 WORK		AL ASSES TASK TEST 3 and Terr		
Prerequisite skill/ pre- knowledge	graphs of special for trends and – linear – const decre • Draw glob descriptio	problem situations, with cus on the following d features: or non-linear ant, increasing or asing val graphs from given ns of a problem identifying features	 Recognise, describe and perform translations, reflections and rotations with geometric figures ad shapes on squared paper Identify and draw lines of symmetry in geometric figures 	 Knowledge of squares and square roots of whole numbers 	 Geometry of 2-I Algebraic equat Calculate the so square roots an rational number 	tions quares, cubes, id cube roots of				