

Rubric based on the v8.3 Year 8 Mathematics Achievement Standard

Achievement Standard	Levels Criteria (Assessable Elements)	A Excellent 1 Advanced	B Good 2 Proficient	C Satisfactory 3 Functional	D Partial 4 Developing	E Minimal 5
Knowledge and Understanding (Extent of knowledge and depth of understanding as demonstrated through the Proficiencies)	Solve everyday problems involving rates, ratios and percentages	Solve everyday problems involving rates, ratios and percentages using highly effective and highly efficient strategies	Solve everyday problems involving rates, ratios and percentages using mostly effective strategies	Solve everyday problems involving rates, ratios and percentages using generally effective strategies	Solve everyday problems involving rates, ratios and percentages using partially effective strategies	Beginning to solve everyday problems involving rates, ratios and percentages
	Describe index laws and apply them to whole numbers	Recognise index laws and apply them to whole numbers in familiar and unfamiliar contexts	Recognise index laws and apply them to whole numbers in familiar and some unfamiliar contexts	Recognise index laws and apply them to whole numbers in familiar contexts	Recognise index laws and apply them to whole numbers in some familiar contexts	Minimal recognition of index laws and apply them to whole numbers
	Describe rational and irrational numbers	Describe rational and irrational numbers in a highly competent and lucid manner	Describe rational and irrational numbers in a mostly competent and clear manner	Describe rational and irrational numbers in a generally competent and reasonably clear manner	Describe rational and irrational numbers in a partially competent and partially clear manner	Describe rational and irrational numbers with direction
	Solve problems involving profit and loss	Highly efficient and highly accurate problem solving involving profit and loss in familiar and unfamiliar contexts	Mostly efficient and mostly accurate problem solving involving profit and loss in familiar and some unfamiliar contexts	Generally efficient and generally accurate problem solving involving profit and loss in familiar contexts	Partially efficient and partially accurate problem solving involving profit and loss in familiar contexts	Attempts problem solving involving profit and loss in familiar contexts with limited efficiency and accuracy
	Make connections between expanding and factorising algebraic expressions	In-depth and comprehensive understanding when making connections between expanding and factorising algebraic expressions	Proficient understanding when making connections between expanding and factorising algebraic expressions	Sound understanding when making connections between expanding and factorising algebraic expressions	Partial understanding when making connections between expanding and factorising algebraic expressions	Little understanding when attempting to make connections between expanding and factorising algebraic expressions

Rubric based on the v8.3 Year 8 Mathematics Achievement Standard

	Solve problems relating to the volume of prisms	Highly efficient and highly accurate problem solving relating to the volume of prisms in familiar and unfamiliar contexts	Mostly efficient and mostly accurate problem solving relating to the volume of prisms in familiar and some unfamiliar contexts	Generally efficient and generally accurate problem solving relating to the volume of prisms in familiar contexts	Partially efficient and partially accurate problem solving relating to the volume of prisms in familiar contexts	Attempts problem solving relating to the volume of prisms in familiar contexts with limited efficiency and accuracy
	Make sense of time duration in real applications	Make sense of time duration in real applications in a highly logical and sophisticated manner	Make sense of time duration in real applications in a mostly logical manner	Make sense of time duration in real applications with adequate logic	Make sense of time duration in real applications with some logic	Make sense of time duration in real applications with direction
	Identify conditions for the congruence of triangles and deduce the properties of quadrilaterals	Identify conditions for the congruence of triangles with comprehensive understanding	Identify conditions for the congruence of triangles with proficient understanding	Identify conditions for the congruence of triangles with adequate understanding	Identify conditions for the congruence of triangles with basic understanding	Identify conditions for the congruence of triangles with little understanding
		Deduce the properties of quadrilaterals in a highly logical manner	Deduce the properties of quadrilaterals in a mostly logical manner	Deduce the properties of quadrilaterals in a generally logical manner	Deduce the properties of quadrilaterals in a partially logical manner	Deduce the properties of quadrilaterals with limited logic
	Model authentic situations with two-way tables and Venn diagrams	Model authentic situations with two-way tables and Venn diagrams with sophisticated understanding and comprehensive justification	Model authentic situations with two-way tables and Venn diagrams with considerable understanding	Model authentic situations with two-way tables and Venn diagrams with reasonable understanding	Model authentic situations with two-way tables and Venn diagrams with guidance	Model authentic situations with two-way tables and Venn diagrams with direction
	Choose appropriate language to describe events and experiments	Choose highly appropriate language to describe events and experiments	Choose mostly appropriate language to describe events and experiments	Choose generally appropriate language to describe events and experiments	Choose partially appropriate language to describe events and experiments	Beginning to choose appropriate language to describe events and experiments

Rubric based on the v8.3 Year 8 Mathematics Achievement Standard

	<p>Explain issues related to the collection of data and the effect of outliers on means and medians in that data</p>	<p>Comprehensive and lucid explanation of issues related to the collection of data and the effect of outliers on means and medians in that data</p>	<p>Detailed and clear explanation of issues related to the collection of data and the effect of outliers on means and medians in that data</p>	<p>Adequate and generally clear explanation of issues related to the collection of data and the effect of outliers on means and medians in that data</p>	<p>Basic and partially clear explanation of issues related to the collection of data and the effect of outliers on means and medians in that data</p>	<p>Limited and vague explanation of issues related to the collection of data and the effect of outliers on means and medians in that data</p>
<p>Mathematical Skills</p> <p>(Sophistication of skills as demonstrated through the Proficiencies)</p> <p>Note: Degrees of accuracy (high, mostly, moderate, partial, limited) are assumed in the A-E range for all skills</p>	<p>Use efficient mental and written strategies to carry out the four operations with integers</p>	<p>Use highly efficient mental and written strategies to carry out the four operations with integers</p>	<p>Use mostly efficient mental and written strategies to carry out the four operations with integers</p>	<p>Use generally efficient mental and written strategies to carry out the four operations with integers</p>	<p>Use partially efficient mental and written strategies to carry out the four operations with integers</p>	<p>Beginning to use efficient mental and written strategies to carry out the four operations with integers</p>
	<p>Simplify a variety of algebraic expressions</p>	<p>Simplify a variety of algebraic expressions in a highly competent manner</p>	<p>Simplify a variety of algebraic expressions in a mostly competent manner</p>	<p>Simplify a variety of algebraic expressions in a generally competent manner</p>	<p>Simplify a variety of algebraic expressions with some competence</p>	<p>Simplify a variety of algebraic expressions with direction</p>
	<p>Solve linear equations and graph linear relationships on the Cartesian plane</p>	<p>Solve linear equations and graph linear relationships on the Cartesian plane in a highly reasoned and highly accurate manner</p>	<p>Solve linear equations and graph linear relationships on the Cartesian plane in a well-reasoned and mostly accurate manner</p>	<p>Solve linear equations and graph linear relationships on the Cartesian plane with adequate reasoning and with moderate accuracy</p>	<p>Solve linear equations and graph linear relationships on the Cartesian plane with some reasoning and with partial accuracy</p>	<p>Solve linear equations and graph linear relationships on the Cartesian plane with little reasoning and with little accuracy</p>
	<p>Convert between units of measurement for area and volume</p>	<p>Highly competent conversion between units of measurement for area and volume</p>	<p>Mostly competent conversion between units of measurement for area and volume</p>	<p>Generally competent conversion between units of measurement for area and volume</p>	<p>Partially competent conversion between units of measurement for area and volume</p>	<p>Conversion between units of measurement for area and volume with minimal competence</p>
	<p>Perform calculations to determine perimeter and area of parallelograms, rhombuses and kites</p>	<p>Perform calculations to determine perimeter and area of parallelograms, rhombuses and kites in a highly competent manner with comprehensive justification</p>	<p>Perform calculations to determine perimeter and area of parallelograms, rhombuses and kites in a mostly competent manner that is well-justified</p>	<p>Perform calculations to determine perimeter and area of parallelograms, rhombuses and kites in a generally competent manner with adequate justification</p>	<p>Perform calculations to determine perimeter and area of parallelograms, rhombuses and kites with some competence and partial justification</p>	<p>Perform calculations to determine perimeter and area of parallelograms, rhombuses and kites with minimal competence and limited justification</p>

Rubric based on the v8.3 Year 8 Mathematics Achievement Standard

	<p>Name the features of circles and calculate the areas and circumferences of circles</p>	<p>Highly accurate naming of the features of circles and calculation of the areas and circumferences of circles with extended understanding</p>	<p>Mostly accurate naming of the features of circles and calculation of the areas and circumferences of circles with considerable understanding</p>	<p>Generally accurate naming of the features of circles and calculation of the areas and circumferences of circles with sound understanding</p>	<p>Partially accurate naming of the features of circles and calculation of the areas and circumferences of circles with partial understanding</p>	<p>Limited naming of the features of circles and calculation of the areas and circumferences of circles with minimal understanding</p>
	<p>Determine the probabilities of complementary events and calculate the sum of probabilities</p>	<p>Determine the probabilities of complementary events and calculate the sum of probabilities with extended understanding</p>	<p>Determine the probabilities of complementary events and calculate the sum of probabilities with considerable understanding</p>	<p>Determine the probabilities of complementary events and calculate the sum of probabilities with sound understanding</p>	<p>Determine the probabilities of complementary events and calculate the sum of probabilities with basic understanding</p>	<p>Determine the probabilities of complementary events and calculate the sum of probabilities with direction</p>