

TAKS-Alt Operational Test Spring 2009 Grade 4 Mathematics Essence Statements

NOTE: The yellow highlight indicates the four state-required essence statements that comprise the TAKS–Alt assessment for Grade 4 Mathematics.

TAKS Objective	TEKS Knowledge and Skills Statement	Essence Statement
Objective 1: The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.	(4.1) Number, operation, and quantitative reasoning. The student uses place value to represent whole numbers and decimals.	Uses place value to demonstrate understanding of numbers.
Objective 1: The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.	(4.2) Number, operation, and quantitative reasoning. The student describes and compares fractional parts of whole objects or sets of objects.	Uses fractions to demonstrate understanding of parts of a whole.
Objective 1: The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.	(4.3) Number, operation, and quantitative reasoning. The student adds and subtracts to solve meaningful problems involving whole numbers and decimals.	Understands and models addition and subtraction.
Objective 1: The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.	(4.4) Number, operation, and quantitative reasoning. The student multiplies and divides to solve meaningful problems involving whole numbers.	Understands and models multiplication and division.
Objective 1: The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.	(4.5) Number, operation, and quantitative reasoning. The student estimates to determine reasonable results.	Uses estimation strategies.
Objective 2: The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.	(4.6) Patterns, relationships, and algebraic thinking. The student uses patterns in multiplication and division.	Understands patterns in mathematical situations.
Objective 2: The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.	(4.7) Patterns, relationships, and algebraic thinking. The student uses organizational structures to analyze and describe patterns and relationships.	Understands relationships between sets.
Objective 3: The student will demonstrate an understanding of geometry and spatial reasoning.	(4.8) Geometry and spatial reasoning. The student identifies and describes attributes of geometric figures using formal geometric language.	Uses vocabulary and attributes to identify geometric figures.
Objective 3: The student will demonstrate an understanding of geometry and spatial reasoning.	(4.9) Geometry and spatial reasoning. The student connects transformations to congruence and symmetry.	Understands transformations in relation to congruence and symmetry.
Objective 3: The student will demonstrate an understanding of geometry and spatial reasoning.	(4.10) Geometry and spatial reasoning. The student recognizes the connection between numbers and their properties and points on a line.	Locates points on a number line.

Objective 4: The student will demonstrate an understanding of the concepts and uses of measurement.	(4.11) Measurement. The student applies measurement concepts. The student is expected to estimate and measure to solve problems involving length (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass.	Uses estimation, unit conversions, and measurement to solve problems.
Objective 4: The student will demonstrate an understanding of the concepts and uses of measurement.	(4.12) Measurement. The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius).	Understands temperature and time.
Objective 5: The student will demonstrate an understanding of probability and statistics.	(4.13) Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data.	Solves problems using data.
Objective 6: The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.	(4.14) Underlying processes and mathematical tools. The student applies Grade 4 mathematics to solve problems connected to everyday experiences and activities in and outside of school.	Uses mathematics to solve everyday problems.
Objective 6: The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.	(4.15) Underlying processes and mathematical tools. The student communicates about Grade 4 mathematics using informal language.	Communicates using informal mathematical language.
Objective 6: The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.	(4.16) Underlying processes and mathematical tools. The student uses logical reasoning.	Uses logical reasoning.