

TAKS-Alt Operational Test Spring 2009

Grade 7 Mathematics

Essence Statements

NOTE: The yellow highlight indicates the four state-required essence statements that comprise the TAKS–Alt assessment for Grade 7 Mathematics.

TAKS Objective	TEKS Knowledge and Skills Statement	Essence Statement
Objective 1: The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.	(7.1) Number, operation, and quantitative reasoning. The student represents and uses numbers in a variety of equivalent forms.	Represents and uses numbers in a variety of forms.
Objective 1: The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.	(7.2) Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, or divides to solve problems and justify solutions.	Solves problems using operations.
Objective 2: The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.	(7.3) Patterns, relationships, and algebraic thinking. The student solves problems involving direct proportional relationships.	Estimates and solves problems using proportions and percents.
Objective 2: The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.	(7.4) Patterns, relationships, and algebraic thinking. The student represents a relationship in numerical, geometric, verbal, and symbolic form.	Uses various forms to represent a mathematical relationship.
Objective 2: The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.	(7.5) Patterns, relationships, and algebraic thinking. The student uses equations to solve problems.	Uses equations to solve problems.
Objective 3: The student will demonstrate an understanding of geometry and spatial reasoning.	(7.6) Geometry and spatial reasoning. The student compares and classifies two- and three-dimensional figures using geometric vocabulary and properties.	Understands and uses geometric vocabulary and properties.
Objective 3: The student will demonstrate an understanding of geometry and spatial reasoning.	(7.7) Geometry and spatial reasoning. The student uses coordinate geometry to describe location on a plane.	Uses coordinate geometry to locate and name points.
Objective 3: The student will demonstrate an understanding of geometry and spatial reasoning.	(7.8) Geometry and spatial reasoning. The student uses geometry to model and describe the physical world.	Uses geometry to understand the physical world.
Objective 4: The student will demonstrate an understanding of the concepts and uses of measurement.	(7.9) Measurement. The student solves application problems involving estimation and measurement.	Uses estimation and measurement to solve problems.
Objective 5: The student will demonstrate an understanding of probability and statistics.	(7.10) Probability and statistics. The student recognizes that a physical or mathematical model can be used to describe the experimental and theoretical probability of real-life events.	Understands probability in relation to real-life events.
Objective 5: The student will demonstrate an understanding of probability and statistics.	(7.11) Probability and statistics. The student understands that the way a set of data is displayed influences its interpretation.	Uses graphs and tables to interpret data.

Objective 5: The student will demonstrate an understanding of probability and statistics.	(7.12) Probability and statistics. The student uses measures of central tendency and range to describe a set of data.	Understands mean, median, mode, and range.
Objective 6: The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.	(7.13) Underlying processes and mathematical tools. The student applies Grade 7 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, 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.	(7.14) Underlying processes and mathematical tools. The student communicates about Grade 7 mathematics through informal and mathematical language, representations, and models.	Communicates using informal mathematical language and models.
Objective 6: The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.	(7.15) Underlying processes and mathematical tools. The student uses logical reasoning to make conjectures and verify conclusions.	Uses logical reasoning.