

TAKS-Alt Operational Test Spring 2009 Grade 6 Mathematics Essence Statements

NOTE: The yellow highlight indicates the four state-required essence statements that comprise the TAKS–Alt assessment for Grade 6 Mathematics.

TAKS Objective	TEKS Knowledge and Skills Statement	Essence Statement
Objective 1: The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.	(6.1) Number, operation, and quantitative reasoning. The student represents and uses rational 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.	(6.2) Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, and 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.	(6.3) Patterns, relationships, and algebraic thinking. The student solves problems involving direct proportional relationships.	Understands ratios and proportions.
Objective 2: The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.	(6.4) Patterns, relationships, and algebraic thinking. The student uses letters as variables in mathematical expressions to describe how one quantity changes when a related quantity changes.	Understands and uses tables, symbols, variables, and formulas.
Objective 2: The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.	(6.5) Patterns, relationships, and algebraic thinking. The student uses letters to represent an unknown in an equation.	Uses variables in an equation.
Objective 3: The student will demonstrate an understanding of geometry and spatial reasoning.	(6.6) Geometry and spatial reasoning. The student uses geometric vocabulary to describe angles, polygons, and circles.	Understands and uses geometric vocabulary and properties.
Objective 3: The student will demonstrate an understanding of geometry and spatial reasoning.	(6.7) Geometry and spatial reasoning. The student uses coordinate geometry to identify location in two dimensions.	Uses coordinate geometry to locate and name points.
Objective 4: The student will demonstrate an understanding of the concepts and uses of measurement.	(6.8) Measurement. The student solves application problems involving estimation and measurement of length, area, time, temperature, volume, weight, and angles.	Uses estimation, unit conversions, and measurement to solve problems.
Objective 5: The student will demonstrate an understanding of probability and statistics.	(6.9) Probability and statistics. The student uses experimental and theoretical probability to make predictions.	Uses probability to make predictions.
Objective 5: The student will demonstrate an understanding of probability and statistics.	(6.10) Probability and statistics. The student uses statistical representations to analyze data.	Uses graphs to represent and analyze data.

<p>Objective 6: The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.</p>	<p>(6.11) Underlying processes and mathematical tools. The student applies Grade 6 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school.</p>	<p>Uses mathematics to solve everyday problems.</p>
<p>Objective 6: The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.</p>	<p>(6.12) Underlying processes and mathematical tools. The student communicates about Grade 6 mathematics through informal and mathematical language, representations, and models.</p>	<p>Communicates using informal mathematical language and models.</p>
<p>Objective 6: The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.</p>	<p>(6.13) Underlying processes and mathematical tools. The student uses logical reasoning to make conjectures and verify conclusions.</p>	<p>Uses logical reasoning.</p>