Texas Assessment of Knowledge and Skills - Modified
Answer Key

Grade: 03
Subject: Mathematics
Administration: April 2009

Item Number	Correct Answer*	Objective Measured	Student Expectations
01	C	01	3.1 (A)
02	C	02	3.6 (C)
03	A	04	3.11 (C)
04	B	06	3.14 (A)
05	C	03	3.9 (C)
06	A	01	3.4 (B)
07	B	05	3.13 (B)
08	B	04	3.11 (A)
09	C	02	3.6 (A)
10	A	06	3.14 (C)
11	A	01	3.1 (C)
12	B	03	3.10 (A)
13	B	02	3.7 (B)
14	C	06	3.15 (B)
15	A	01	3.2 (C)
16	B	05	3.13 (A)
17	A	04	3.12 (B)
18	B	01	3.1 (B)
19	A	02	3.6 (B)
20	C	06	3.14 (B)
21	B	03	3.9 (A)
22	B	01	3.4 (C)
23	A	03	3.8 (A)
24	B	06	3.14 (C)
25	B	04	3.11 (B)
26	A	01	3.3 (B)
27	B	06	3.16 (A)
28	C	02	3.7 (A)
29	A	01	3.3 (A)
30	C	03	3.8 (A)
31	A	05	3.13 (C)
32	B	04	3.12 (A)

***Answer choices are not designated in the Grade 03 test booklet as "A," "B," "C," or "D." Instead, students respond to test items by marking the answer ovals in the test booklet. In some cases, mathematics answer choices for a test item are arranged in two columns. In this answer key, "A" and "B" represent the answer choices in the first column, and "C" and "D" represent the answers in the second column.**

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Grade 3 Mathematics

For a more complete description of the objectives measured, please refer to the Revised TAKS Information Booklet for Grade 3 Mathematics at http://www.tea.state.tx.us/student.assessment/taks/booklets/index.html.

Objective 1: The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.

(3.1) **Number, operation, and quantitative reasoning.** The student uses place value to communicate about increasingly large whole numbers in verbal and written form, including money. The student is expected to

(A) use place value to read, write (in symbols and words), and describe the value of whole numbers through 999,999;

(B) use place value to compare and order whole numbers through 9,999; and

(C) determine the value of a collection of coins and bills.

(3.2) **Number, operation, and quantitative reasoning.** The student uses fraction names and symbols (with denominators of 12 or less) to describe fractional parts of whole objects or sets of objects. The student is expected to

(B) compare fractional parts of whole objects or sets of objects in a problem situation using [concrete] models; and

(C) use fraction names and symbols to describe fractional parts of whole objects or sets of objects.

(3.3) **Number, operation, and quantitative reasoning.** The student adds and subtracts to solve meaningful problems involving whole numbers. The student is expected to

(A) model addition and subtraction using pictures, words, and numbers; and

(B) select addition or subtraction and use the operation to solve problems involving whole numbers through 999.

(3.4) **Number, operation, and quantitative reasoning.** The student recognizes and solves problems in multiplication and division situations. The student is expected to

(B) solve and record multiplication problems (up to two digits times one digit); and

(C) use models to solve division problems and use number sentences to record the solutions.

(3.5) **Number, operation, and quantitative reasoning.** The student estimates to determine reasonable results. The student is expected to

(A) round whole numbers to the nearest ten or hundred to approximate reasonable results in problem situations; and

(B) use strategies including rounding and compatible numbers to estimate solutions to addition and subtraction problems.

Grade 3 Mathematics (continued)

Objective 2: The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.

(3.6) **Patterns, relationships, and algebraic thinking.** The student uses patterns to solve problems. The student is expected to

(A) identify and extend whole-number and geometric patterns to make predictions and solve problems;

(B) identify patterns in multiplication facts using [concrete objects,] pictorial models[, or technology]; and

(C) identify patterns in related multiplication and division sentences (fact families) such as $2 \times 3 = 6$, $3 \times 2 = 6$, $6 \div 2 = 3$, $6 \div 3 = 2$.

(3.7) **Patterns, relationships, and algebraic thinking.** The student uses lists, tables, and charts to express patterns and relationships. The student is expected to

(A) generate a table of paired numbers based on a real-life situation such as insects and legs; and

(B) identify and describe patterns in a table of related number pairs based on a meaningful problem and extend the table.

Objective 3: The student will demonstrate an understanding of geometry and spatial reasoning.

(3.8) **Geometry and spatial reasoning.** The student uses formal geometric vocabulary. The student is expected to

(A) identify, classify, and describe two- and three-dimensional geometric figures by their attributes. The student compares two-dimensional figures, three-dimensional figures, or both by their attributes using formal geometry vocabulary.

(3.9) **Geometry and spatial reasoning.** The student recognizes congruence and symmetry. The student is expected to

(A) identify congruent two-dimensional figures; and

(C) identify lines of symmetry in two-dimensional geometric figures.

(3.10) **Geometry and spatial reasoning.** The student recognizes that a line can be used to represent numbers and fractions and their properties and relationships. The student is expected to

(A) locate and name points on a number line using whole numbers and fractions, including halves and fourths.

Objective 4: The student will demonstrate an understanding of the concepts and uses of measurement.

(3.11) **Measurement.** The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses standard units to describe length, area, capacity/volume, and weight/mass. The student is expected to

(A) use linear measurement tools to estimate and measure lengths using standard units;

(B) use standard units to find the perimeter of a shape; and

(C) use [concrete and] pictorial models of square units to determine the area of two-dimensional surfaces.

(3.12) **Measurement.** The student reads and writes time and measures temperature in degrees Fahrenheit to solve problems. The student is expected to

(A) use a thermometer to measure temperature; and

(B) tell and write time shown on analog and digital clocks.

Objective 5: The student will demonstrate an understanding of probability and statistics.

(3.13) **Probability and statistics.** The student solves problems by collecting, organizing, displaying, and interpreting sets of data. The student is expected to

(A) collect, organize, record, and display data in pictographs and bar graphs where each picture or cell might represent more than one piece of data;

(B) interpret information from pictographs and bar graphs; and

(C) use data to describe events as more likely than, less likely than, or equally likely as.

Objective 6: The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.

(3.14) **Underlying processes and mathematical tools.** The student applies Grade 3 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to

(A) identify the mathematics in everyday situations;

(B) solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness; and

(C) select or develop an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.

(3.15) **Underlying processes and mathematical tools.** The student communicates about Grade 3 mathematics using informal language. The student is expected to

(B) relate informal language to mathematical language and symbols.

(3.16) **Underlying processes and mathematical tools.** The student uses logical reasoning. The student is expected to

(A) make generalizations from patterns or sets of examples and nonexamples.