Texas Assessment of Knowledge and Skills - Modified
Answer Key

Grade: 05
Subject: Mathematics
Administration: April 2009

Item Number	Correct Answer	Objective Measured	Student Expectations
01	A	03	5.8 (A)
02	G	05	5.13 (A)
03	A	02	5.6 (A)
04	H	06	5.16 (A)
05	C	01	5.2 (A)
06	G	04	5.10 (C)
07	A	05	5.12 (A)
08	H	01	5.3 (D)
09	B	04	5.11 (A)
10	G	02	5.5 (A)
11	C	01	5.2 (C)
12	G	06	5.14 (A)
13	A	03	5.7 (A)
14	F	01	5.3 (E)
15	B	03	5.9 (A)
16	F	04	5.10 (C)
17	B	02	5.5 (B)
18	H	06	5.15 (B)
19	B	01	5.3 (B)
20	G	02	5.6 (A)
21	C	04	5.11 (B)
22	F	01	5.4 (A)
23	B	03	5.7 (A)
24	F	02	5.5 (A)
25	B	01	5.3 (C)
26	F	06	5.14 (B)
27	B	04	5.10 (A)
28	H	05	5.13 (B)
29	C	02	5.6 (A)
30	H	01	5.3 (A)
31	A	06	5.14 (C)
32	H	04	5.10 (C)
33	B	03	5.9 (A)
34	H	01	5.1 (A)
35	A	03	5.7 (A)

Copyright © 2009, Texas Education Agency. All rights reserved. Reproduction of all or portions of this work is prohibited without express written permission from the Texas Education Agency.

Grade 5 Mathematics

For a more complete description of the objectives measured, please refer to the Revised TAKS Information Booklet for Grade 5 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.

(5.1) **Number, operation, and quantitative reasoning.** The student uses place value to represent whole numbers and decimals. The student is expected to

(A) use place value to read, write, compare, and order whole numbers through 999,999,999,999; and

(B) use place value to read, write, compare, and order decimals through the thousandths place.

(5.2) **Number, operation, and quantitative reasoning.** The student uses fractions in problem-solving situations. The student is expected to

(A) generate a fraction equivalent to a given fraction such as 1/2 and 3/6 or 4/12 and 1/3;

(B) generate a mixed number equivalent to a given improper fraction or generate an improper fraction equivalent to a given mixed number;

(C) compare two fractional quantities in problem-solving situations using a variety of methods, including common denominators; and

(D) use models to relate decimals to fractions that name tenths, hundredths, and thousandths.

(5.3) **Number, operation, and quantitative reasoning.** The student adds, subtracts, multiplies, and divides to solve meaningful problems. The student is expected to

(A) use addition and subtraction to solve problems involving whole numbers and decimals;

(B) use multiplication to solve problems involving whole numbers (no more than three digits times two digits without technology);

(C) use division to solve problems involving whole numbers (no more than two-digit divisors and three-digit dividends without technology), including interpreting the remainder within a given context;

(D) identify common factors of a set of whole numbers; and

(E) model situations using addition and/or subtraction involving fractions with like denominators using [concrete objects,] pictures, words, and numbers.

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

(A) use strategies, including rounding and compatible numbers to estimate solutions to addition, subtraction, multiplication, and division problems.

Grade 5 Mathematics (continued)

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

(5.5) **Patterns, relationships, and algebraic thinking.** The student makes generalizations based on observed patterns and relationships. The student is expected to

(A) describe the relationship between sets of data in graphic organizers such as lists, tables, charts, and diagrams; and

(B) identify prime and composite numbers using [concrete objects,] pictorial models, and patterns in factor pairs.

(5.6) **Patterns, relationships, and algebraic thinking.** The student describes relationships mathematically. The student is expected to

(A) select from and use diagrams and equations such as $y = 5 + 3$ to represent meaningful problem situations.

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

(5.7) **Geometry and spatial reasoning.** The student generates geometric definitions using critical attributes. The student is expected to

(A) identify essential attributes including parallel, perpendicular, and congruent parts of two- and three-dimensional geometric figures.

(5.8) **Geometry and spatial reasoning.** The student models transformations. The student is expected to

(B) identify the transformation that generates one figure from the other when given two congruent figures on a Quadrant I coordinate grid.

(5.9) **Geometry and spatial reasoning.** The student recognizes the connection between ordered pairs of numbers and locations of points on a plane. The student is expected to

(A) locate and name points on a coordinate grid using ordered pairs of whole numbers.

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

(5.10) **Measurement**. The student applies measurement concepts involving length (including perimeter), area, capacity/volume, and weight/mass to solve problems. The student is expected to

(A) perform simple conversions within the same measurement system (SI (metric) or customary);

(B) connect models for perimeter, area, and volume with their respective formulas; and

(C) select and use appropriate units and formulas to measure length, perimeter, area, and volume.

(5.11) **Measurement.** The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius). The student is expected to

(A) solve problems involving changes in temperature; and

(B) solve problems involving elapsed time.

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

(5.12) **Probability and statistics.** The student describes and predicts the results of a probability experiment. The student is expected to

(A) use fractions to describe the results of an experiment;

(B) use experimental results to make predictions; and

(C) list all possible outcomes of a probability experiment such as tossing a coin.

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

(A) use tables of related number pairs to make line graphs;

(B) describe characteristics of data presented in tables and graphs including median, mode, and range; and

(C) graph a given set of data using an appropriate graphical representation such as a picture or line graph.

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

(5.14) **Underlying processes and mathematical tools.** The student applies Grade 5 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.

(5.15) **Underlying processes and mathematical tools.** The student communicates about Grade 5 mathematics using informal language. The student is expected to

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

(5.16) **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.