



Texas Assessment of Knowledge and Skills - Answer Key

Grade: 05
Subject: Mathematics
Administration: Spring 2003

Item Number	Correct Answer	Objective Measured	Student Expectations
01	D	01	5.3 (B)
02	H	03	5.9 (A)
03	A	02	5.6 (A)
04	F	01	5.1 (B)
05	C	05	5.13 (C)
06	F	06	5.14 (A)
07	C	01	5.4 (A)
08	H	04	5.11 (A)
09	D	02	5.6 (A)
10	J	03	5.7 (B)
11	A	03	5.8 (A)
12	H	06	5.16 (A)
13	A	01	5.3 (D)
14	F	04	5.10 (A)
15	B	01	5.1 (A)
16	J	04	5.11 (B)
17	B	06	5.14 (B)
18	G	03	5.7 (B)
19	B	05	5.12 (A)
20	J	02	5.5 (B)
21	282	01	5.3 (A)
22	F	02	5.5 (C)
23	C	03	5.8 (B)
24	F	04	5.11 (B)
25	C	04	5.10 (A)
26	F	02	5.5 (A)
27	B	01	5.2 (B)
28	H	04	5.11 (A)
29	C	06	5.14 (C)
30	G	05	5.13 (B)
31	C	06	5.14 (B)
32	J	02	5.5 (B)
33	B	01	5.3 (E)
34	H	02	5.6 (A)
35	B	03	5.7 (A)
36	H	06	5.14 (C)
37	C	04	5.11 (A)
38	G	01	5.3 (A)
39	B	01	5.2 (C)
40	H	01	5.2 (A)
41	A	05	5.13 (A)
42	G	06	5.14 (A)
43	C	03	5.9 (A)
44	F	06	5.15 (B)

Grade 5 Mathematics

Refer to the *TAKS Information Booklet Mathematics Grades 3-6* or *Mathematics Grades 5-9* for a more complete description of the objectives measured.

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 the billions place; 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 equivalent fractions;
 - (B) compare two fractional quantities in problem-solving situations using a variety of methods, including common denominators; and
 - (C) 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);
 - (D) identify prime factors of a whole number and common factors of a set of whole numbers; and
 - (E) model and record addition and subtraction of fractions with like denominators in problem-solving situations.
- (5.4) **Number, operation, and quantitative reasoning.** The student estimates to determine reasonable results. The student is expected to
- (A) round whole numbers and decimals through tenths to approximate reasonable results in problem situations; and
 - (B) estimate to solve problems where exact answers are not required.

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) use [concrete objects or] pictures to make generalizations about determining all possible combinations;
 - (B) use lists, tables, charts, and diagrams to find patterns and make generalizations such as a procedure for determining equivalent fractions; and
 - (C) identify prime and composite numbers using [concrete] 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 number sentences to represent real-life 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 critical attributes including parallel, perpendicular, and congruent parts of geometric shapes and solids; and
 - (B) use critical attributes to define geometric shapes or solids.
- (5.8) **Geometry and spatial reasoning.** The student models transformations. The student is expected to
- (A) sketch the results of translations, rotations, and reflections; and
 - (B) describe the transformation that generates one figure from the other when given two congruent figures.
- (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 selects and uses appropriate units and procedures to measure volume. The student is expected to
- (A) measure volume using [concrete] models of cubic units.

Grade 5 Mathematics (continued)

- (5.11) **Measurement.** The student applies measurement concepts. The student is expected to
- (A) measure to solve problems involving length (including perimeter), weight, capacity, time, temperature, and area; and
 - (B) describe numerical relationships between units of measure within the same measurement system such as an inch is one-twelfth of a foot.

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; and
 - (B) use experimental results to make predictions.
- (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 the shape and spread of the data and the middle number; and
 - (C) graph a given set of data using an appropriate graphical representation such as a picture or line.

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) use a problem-solving model that incorporates 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 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 to make sense of his or her world. The student is expected to
- (A) make generalizations from patterns or sets of examples and nonexamples.