

TEXAS ASSESSMENT OF KNOWLEDGE AND SKILLS (TAKS)

BLUEPRINT FOR GRADES 9-11 MATHEMATICS

| Objectives | Grade 9 | Grade 10 | Grade 11 Exit Level |
|--|-----------|-----------|------------------------|
| Objective 1—Functional relationships | 5 | 5 | 5 |
| Objective 2—Properties and attributes of functions | 5 | 5 | 5 |
| Objective 3—Linear functions | 5 | 5 | 5 |
| Objective 4—Linear equations and inequalities | 5 | 5 | 5 |
| Objective 5—Quadratic and other nonlinear functions | 4 | 5 | 5 |
| Objective 6—Geometric relationships and spatial reasoning | 4 | 5 | 7 |
| Objective 7—2D and 3D representations | 4 | 5 | 7 |
| Objective 8—Measurement | 6 | 7 | 7 |
| Objective 9—Percents, proportions, probability, and statistics | 5 | 5 | 5 |
| Objective 10—Mathematical processes and tools | 9 | 9 | 9 |
| Total number of items | 52 | 56 | 60 |

At all grade levels, items are primarily multiple choice, although a small number of griddable items will be included on a test form.

Curriculum Rationale

In high school, TAKS mathematics items are of greater complexity, require a more in-depth level of critical thinking than TAAS, and are based on comprehensive high school courses as opposed to only eighth grade TEKS. In fact, the high school level mathematics TAKS assessments are closer to the Algebra I end-of-course test than the exit level TAAS mathematics assessment. These factors will likely increase the average length of time needed to complete a TAKS test.

Algebra I: Objectives 1-5

For the 9th and 10th grade tests, Objectives 1-5 receive more emphasis than the other mathematical areas assessed (e.g., geometry and statistics), as most students will have recently completed this course. Additionally, Algebra I is a building block for higher-level mathematics coursework.

For the 11th grade exit level test, Objectives 1-5 still receive a great deal of emphasis, but the percentage of Algebra I items as compared to the overall percentage is slightly less due to the increased emphasis on Geometry.

Geometry and Measurement: Objectives 6-8

For the 9th and 10th grade tests, Objectives 6-8 receive slightly less emphasis than Algebra I. This is due to the fact that not all students will have completed the high school geometry course by the end of 10th grade. Therefore, the 9th and 10th grade assessments are limited to eighth grade geometry TEKS, which have been chosen to reflect to the greatest extent possible the TEKS student expectations eligible for assessment on the 11th grade exit level test.

For the 11th grade exit level test, Objectives 6-8 receive increased emphasis because students should have completed high school Geometry by the 11th grade. Therefore, the TEKS student expectations eligible for assessment in these objectives at Grade 11 come from the high school Geometry course.

Probability and Statistics: Objective 9

Objective 9 remains constant for all three high school assessments. Objective 9 is limited to eighth grade TEKS and therefore receives less emphasis than other objectives. However, probability and statistics skills are naturally emphasized in high school courses, and items related to probability and statistics will reflect this emphasis.

Mathematical Processes and Tools: Objective 10

Objective 10 maintains a strong focus across grades, as the included TEKS not only provide students varied opportunities to link skills from different mathematical areas but also allow students to think critically and problem solve effectively. The problems solved in this objective combine content from multiple objectives. For example, calculating the effect of the change in slope on geometric figures as they appear on a coordinate grid would link skills from Objectives 3 and 6.