TEA UPDATE ON THE STAAR PROGRAM

Conference for the
Advancement of Mathematics Teaching
July 2011

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Texas Education Agency

AGENDA

- Overview of the STAAR program
- Graduation requirements for STAAR
- Testing for STAAR in spring 2012

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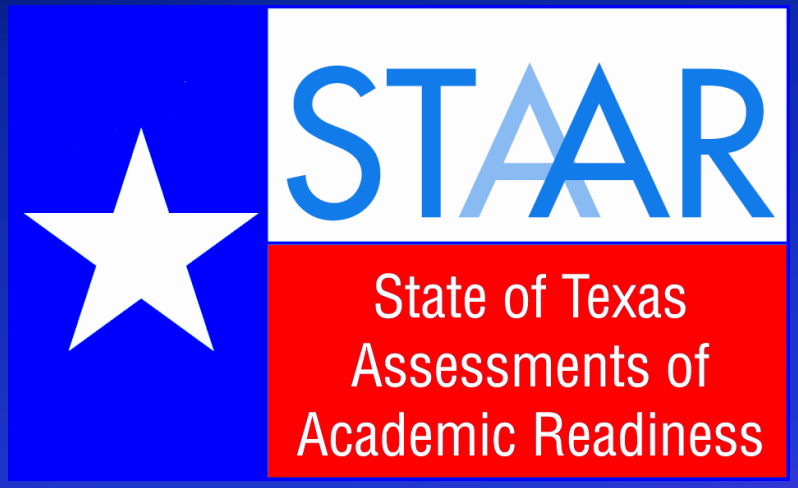
- New assessment program for
  - Grades 3–8
  - High school
- Begins in 2011–2012



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- For grades 3–8, tests are in same grades and subjects as TAKS.
  - Grades 3–8 mathematics
  - Grades 3–8 reading
  - Grades 4 and 7 writing
  - Grades 5 and 8 science
  - Grade 8 social studies
- For high school, twelve end-of-course tests replace ten grade-level tests.

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- STAAR will focus on "clearer, fewer, and deeper".
  - Provide a more clearly articulated assessment program
  - Focus on fewer skills
  - Address skills in a deeper manner

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Development of STAAR

- Follows the test development process posted on the TEA student assessment website
- Involves educators in focus groups, advisory committees, and item reviews
- Involves higher-educator faculty for EOC assessments
- Includes the Texas Higher Education Coordinating Board for EOC assessments

STAAR

Development of STAAR

- Educator involvement in the test development process is critical to the process.
- Highly qualified educators are needed to serve on educator committees.
- The Educator Recommendation Form can be found on the student assessment website at http://www.tea.state.tx.us/student.assessment/directory/#e.

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Educator Advisory Committees

- Reviewed TEKS curriculum to determine what can and cannot be assessed

- Determined that the majority of the TEKS are eligible for the assessment because they can be tested

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Educator Advisory Committees

- Reviewed eligible TEKS to determine what should be the focus of the assessment; these are called Readiness Standards

- Recommended other assessed TEKS as Supporting Standards

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In general, Readiness Standards

- **Are essential for success in the current grade or course**
- **Are important for preparedness for the next grade or course**
- **Support college and career readiness**
- **Necessitate in-depth instruction**
- **Address broad and deep ideas**

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In general, Supporting Standards

- **May be introduced in the current grade or course and emphasized in a subsequent year.**
- **May be emphasized in a previous year and reinforced in the current grade or course.**
- **May play a role in preparing students for the next grade or course but not a central role.**
- **May address more narrowly defined ideas.**

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- **Readiness and Supporting Standards are identified in the assessed curriculum documents.**

- **These documents are posted on the TEA student assessment website at http://www.tea.state.tx.us/student.assessment/staar/.**

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Grade 5 Math Assessment—Eligible TEKS—Reporting Category 4

(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); ***Supporting Standard***

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

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

(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 ***Supporting Standard***

(B) solve problems involving elapsed time. ***Supporting Standard***

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- **Readiness Standards**
  - **Encompass 30–40% of the eligible TEKS**
  - **Will make up 60–65% of the assessment**
- **Supporting Standards**
  - **Encompass 60–70% of the eligible TEKS**
  - **Will make up 35–40% of the assessment**

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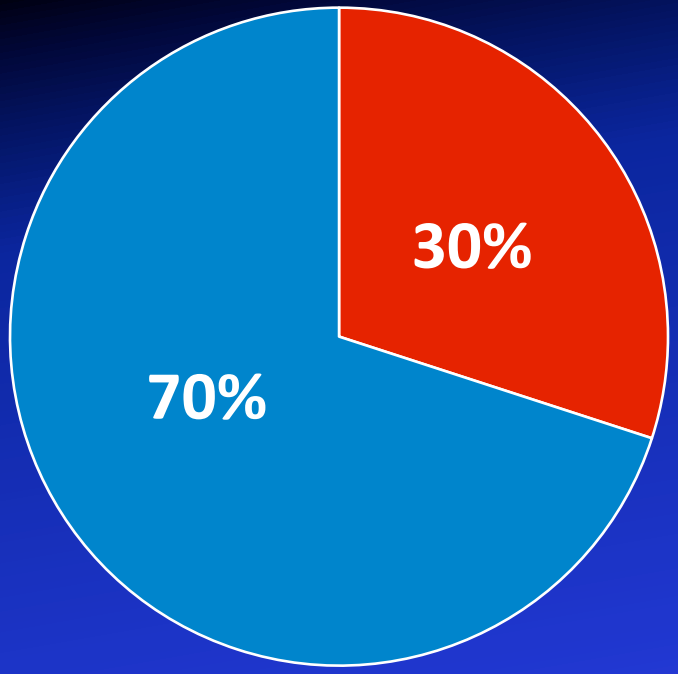
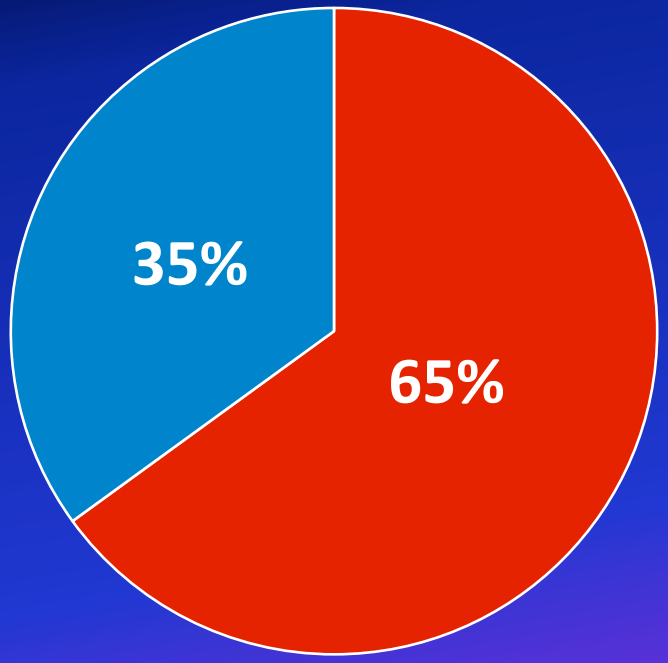
Eligible Content Standards From TEKS



Assessment Blueprint



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Grade 7 Mathematics Blueprint

Underlying Processes and Mathematical Tools is not a separate reporting category. These skills will be incorporated into at least 75% of the test questions from reporting categories 1–5 and will be identified along with the content standards.

Reporting Categories	Number of Standards		Number of Questions	
Reporting Category 1: Numbers, Operations, and Quantitative Reasoning	Readiness Standards	3	13	
	Supporting Standards	7		
	Total	10		
Reporting Category 2: Patterns, Relationships, and Algebraic Reasoning	Readiness Standards	3	13	
	Supporting Standards	4		
	Total	7		
Reporting Category 3: Geometry and Spatial Reasoning	Readiness Standards	2	10	
	Supporting Standards	7		
	Total	9		
Reporting Category 4: Measurement	Readiness Standards	2	8	
	Supporting Standards	1		
	Total	3		
Reporting Category 5: Probability and Statistics	Readiness Standards	2	10	
	Supporting Standards	4		
	Total	6		
Readiness Standards	**Total Number of Standards**	**12**	**60%–65%**	**32–35**
Supporting Standards	**Total Number of Standards**	**23**	**35%–40%**	**19–22**
Total Number of Questions on Test			**50 Multiple Choice 4 Griddable 54 Total**	

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Underlying Processes and Mathematical Tools (Process Skills)

- **Will be assessed differently**
- **Will be assessed in context, not in isolation**
- **Will be assessed in a more integrated and authentic manner**

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Underlying Processes and Mathematical Tools (Process Skills)

- Will not be listed under a separate reporting category
- Will be incorporated into at least 75% of the test questions
- Will be reported along with the content skills

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Examples of Underlying Processes and Mathematical Tools (Process Skills)

- **3.15B, relate informal language to mathematical language and symbols**
- **4.14A, identify the mathematics in everyday situations**
- **7.13B, use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness**

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Griddable Questions

- A type of open-ended question used for science and mathematics assessments

- Purpose is to give students opportunities to derive answers independently without being influenced by answer choices provided with the questions

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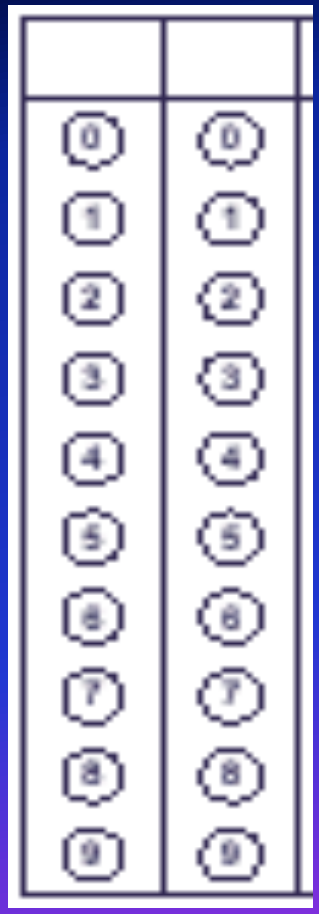
- Grade 3 Math
  - Will have 3 griddable questions
  - Will use same grid as is currently used on TAKS



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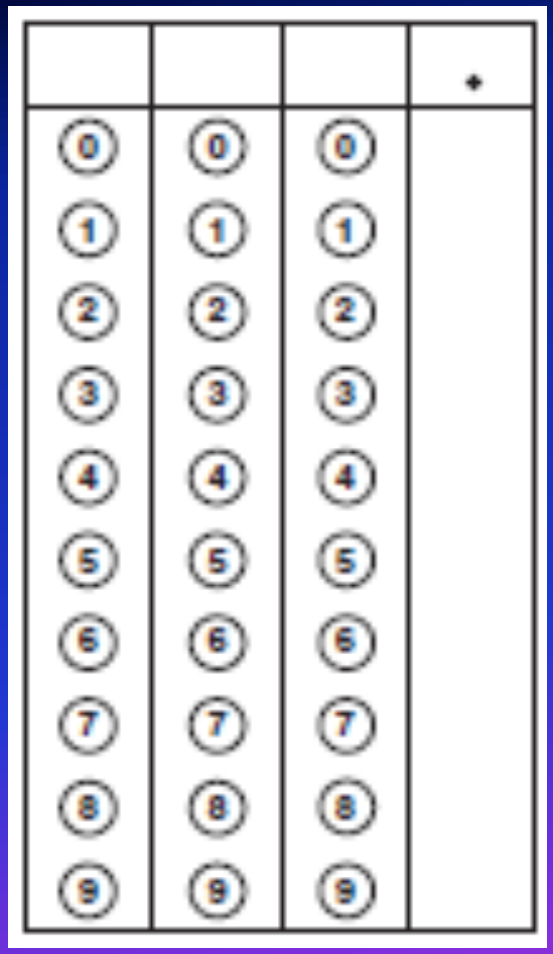
- Grades 4 and 5 Math
  - Will have 3 griddable questions
  - Will use same grid as is currently used on TAKS



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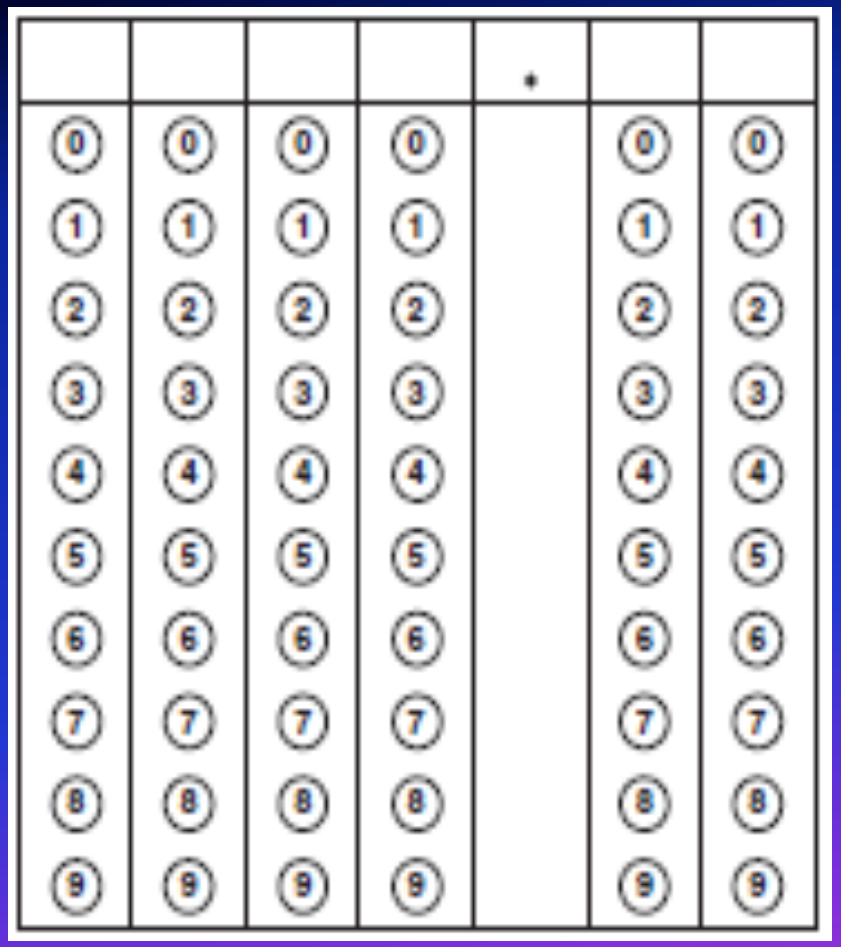
- Grades 6–8 Math
  - Will have 4 griddable questions
  - Will use same grid as is currently used on TAKS



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Griddable Questions for Grades 3–8

- Correct answer will be a positive number.
- Answer grid includes a fixed decimal point with the exception of grade 3.
- Students must enter their answer in the correct columns with respect to the fixed decimal point.

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Griddable Questions for Grades 3–8

- Students must enter their answer in the boxes and then fill in the corresponding bubbles.
- Students do not have to use all the boxes.
- Extra zeros may be filled in (either before or after the answer) as long as their placement does not affect the value of the answer.

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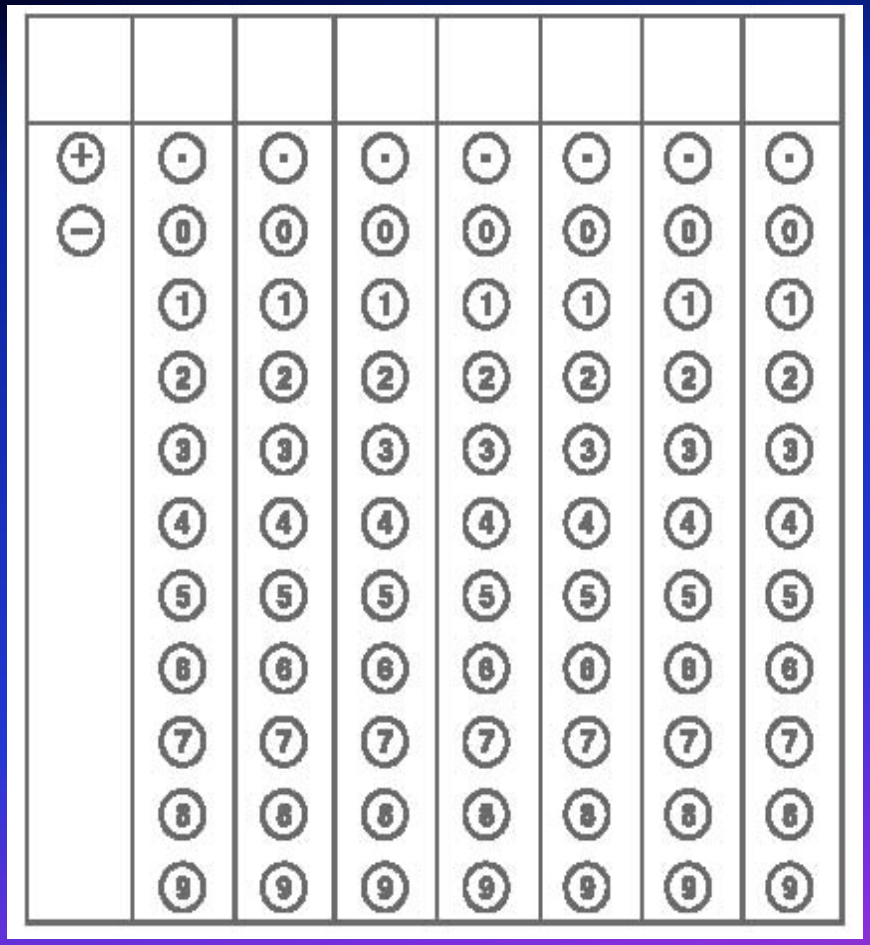
- **Algebra I, Geometry, and Algebra II**
  - **Will have 5 griddable questions**
  - **Will use new grid**



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Griddable Questions for High School

- **Correct answer can be a positive or negative number.**
- **If answer is a negative number, students must enter a negative sign; otherwise answer will default to positive.**
- **Answer grid includes a floating decimal point.**
- **If answer is a decimal number, students must enter a decimal point.**

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Griddable Questions for High School

- Students must enter their answer in the boxes (paper and online) and then fill in the corresponding bubbles (paper only).
- Students do not have to use all the boxes.
- Students can place their answer in any set of consecutive boxes.
- Extra zeros may be filled in (either before or after the answer) as long as their placement does not affect the value of the answer.

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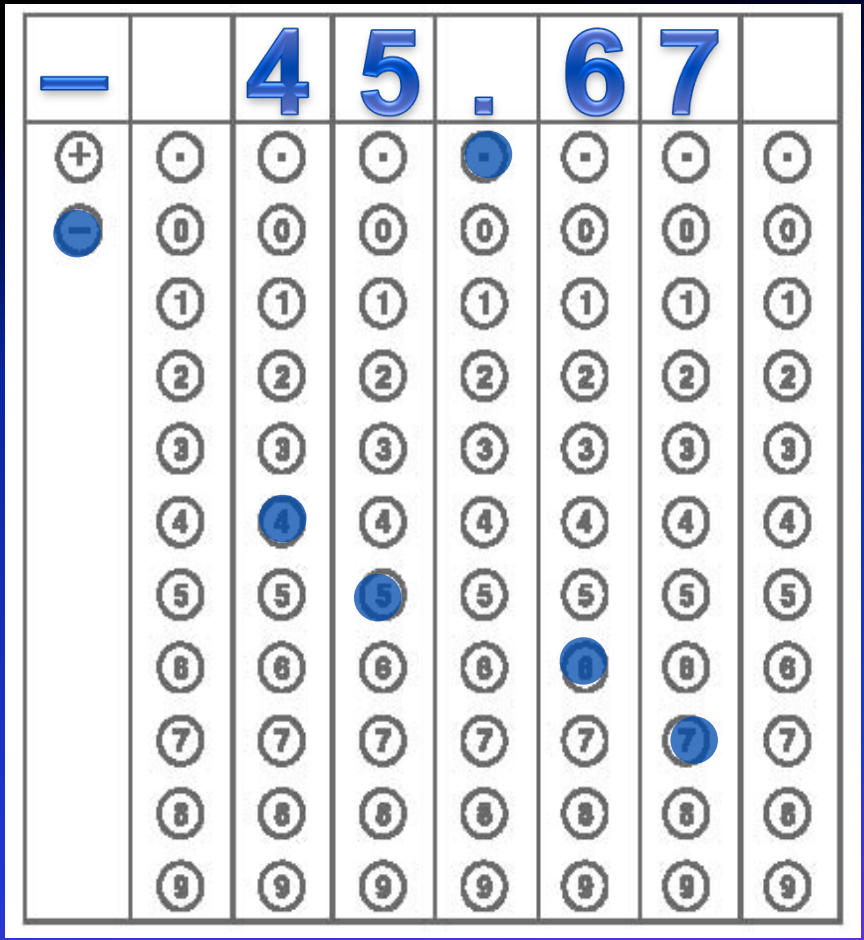
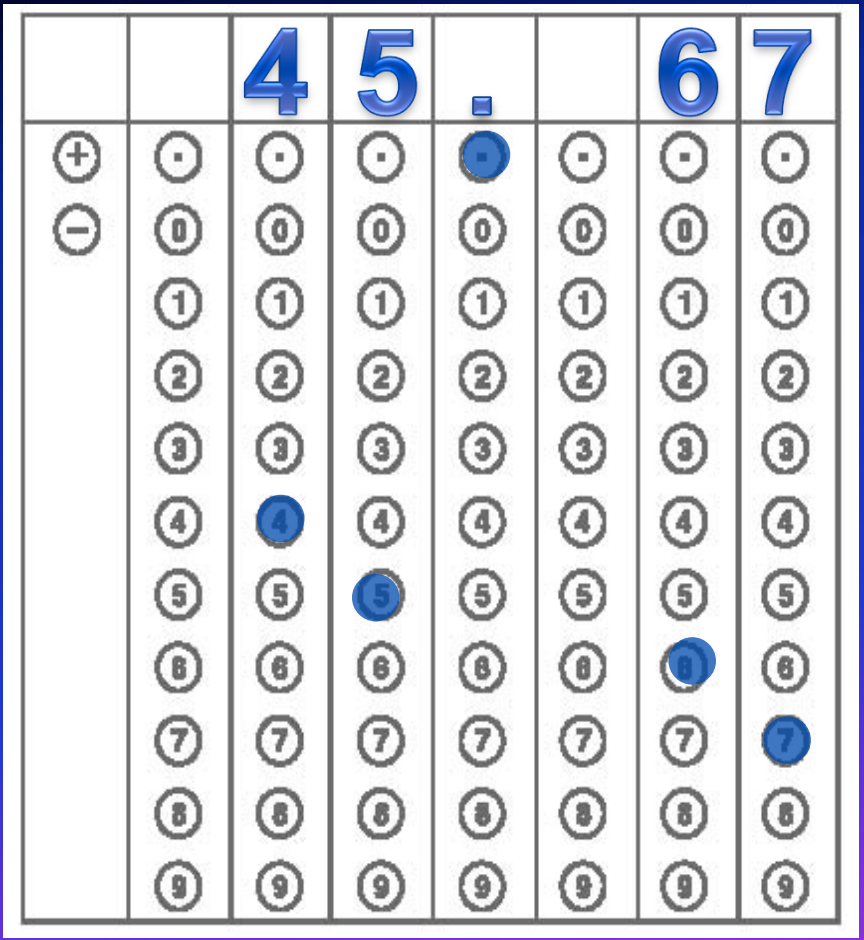
Correct



Incorrect



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Calculator Requirements

- Each student must have a graphing calculator to use throughout the test (for both paper and online administrations)
  - Algebra I
  - Geometry
  - Algebra II

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Graph Paper

- Will be embedded in the paper test booklets
- Will be perforated so students can tear it out
- Is one page, front and back

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Reference Materials (Mathematics Chart)

- Will be embedded in the paper test booklets
- Will be perforated so students can tear them out
- Will have a customary ruler (front) and a metric ruler (back) on the outside edge for grades 3–8

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Geometry Reference Materials

CIRCUMFERENCE			
Circle	$C = 2\pi r$	or	$C = \pi d$

AREA	
Triangle	$A = \frac{1}{2}bh$
Rectangle or parallelogram	$A = bh$
Rhombus	$A = \frac{1}{2}d_1d_2$
Trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$
Regular polygon	$A = \frac{1}{2}aP$
Circle	$A = \pi r^2$

SURFACE AREA	Lateral	Total
Prism	$S = Ph$	$S = Ph + 2B$
Pyramid	$S = \frac{1}{2}Pl$	$S = \frac{1}{2}Pl + B$
Cylinder	$S = 2\pi rh$	$S = 2\pi rh + 2\pi r^2$
Cone	$S = \pi rl$	$S = \pi rl + \pi r^2$
Sphere		$S = 4\pi r^2$

VOLUME	
Prism or cylinder	$V = Bh$
Pyramid or cone	$V = \frac{1}{3}Bh$
Sphere	$V = \frac{4}{3}\pi r^3$

COORDINATE GEOMETRY	
Midpoint	$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$
Distance formula	$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
Slope of a line	$m = \frac{y_2 - y_1}{x_2 - x_1}$
Slope-intercept form of a linear equation	$y = mx + b$
Point-slope form of a linear equation	$y - y_1 = m(x - x_1)$
Standard form of a linear equation	$Ax + By = C$

RIGHT TRIANGLES

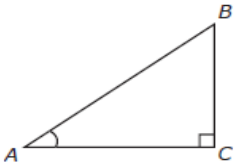
Pythagorean theorem $a^2 + b^2 = c^2$

Trigonometric ratios

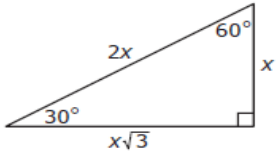
$\sin A = \frac{\text{opposite leg}}{\text{hypotenuse}}$

$\cos A = \frac{\text{adjacent leg}}{\text{hypotenuse}}$

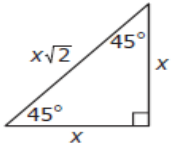
$\tan A = \frac{\text{opposite leg}}{\text{adjacent leg}}$



30° – 60° – 90° triangle



45° – 45° – 90° triangle



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Grade 6 Mathematics Reference Materials

LENGTH

Customary	Metric
1 mile (mi) = 1,760 yards (yd)	1 kilometer (km) = 1,000 meters (m)
1 yard (yd) = 3 feet (ft)	1 meter (m) = 100 centimeters (cm)
1 foot (ft) = 12 inches (in.)	1 centimeter (cm) = 10 millimeters (mm)

VOLUME AND CAPACITY

Customary	Metric
1 gallon (gal) = 4 quarts (qt)	1 liter (L) = 1,000 milliliters (mL)
1 quart (qt) = 2 pints (pt)	
1 pint (pt) = 2 cups (c)	
1 cup (c) = 8 fluid ounces (fl oz)	

WEIGHT AND MA

Customar	Metric
1 ton (T) = 2,000 p nds (	1 kilogram (kg) = 1,000 grams (g)
1 pound (lb) = 16 o z)	1 gram (g) = 1,000 milligrams (mg)

TIME

1 year = 12 months
1 year = 52 weeks
1 week = 7 days
1 day = 24 hours
1 hour = 60 minutes
1 minute = 60 seconds

PERIMETER

Square	$P = 4s$
Rectangle	$P = 2l + 2w$

CIRCUMFERENCE

Circle	$C = 2\pi r$	or	$C = \pi d$

AREA

Triangle	$A = \frac{bh}{2}$	or	$A = \frac{1}{2}bh$
Square			$A = s^2$
Rectangle	$A =$	or	$A = bh$
Parallelogram			$A = bh$
Trapezoid	$A = \frac{(b_1 + b_2)h}{2}$	or	$A = \frac{1}{2}(b_1 + b_2)h$
Circle			$A = \pi r^2$

VOLUME

Cube			$V = s^3$
Rectangular prism	$V = lwh$	or	$V = Bh$

ADDITIONAL INFORMATION

Pi	$\pi \approx 3$

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STAAR

- **Resources available**
  - Description of the new assessment model
  - Comparison of TAKS and STAAR
  - Performance labels and policy definitions
  - Assessed curriculum
  - Assessment blueprints
  - Reference materials
  - Assessing process skills
  - Griddable item format
- **Resources still to come—sample items**
- **Resources are posted on the student assessment website at http://www.tea.state.tx.us/student.assessment/staar/.**

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- Testing policies that have been communicated
  - 4-hour time limit
  - Make-up testing
  - Scorable grade 3 answer documents
  - Dyslexia accommodations to include students in grade 3 through high school

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- Testing policies still being discussed
  - One day administrations versus testing windows
  - Accommodations
  - Test release plan
  - Substitute assessments

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Performance Labels

- There will be two cut scores, which will identify three performance categories for the general STAAR assessments.

- The labels for the performance categories are
  - Level III: Advanced Academic Performance
  - Level II: Satisfactory Academic Performance
  - Level I: Unsatisfactory Academic Performance

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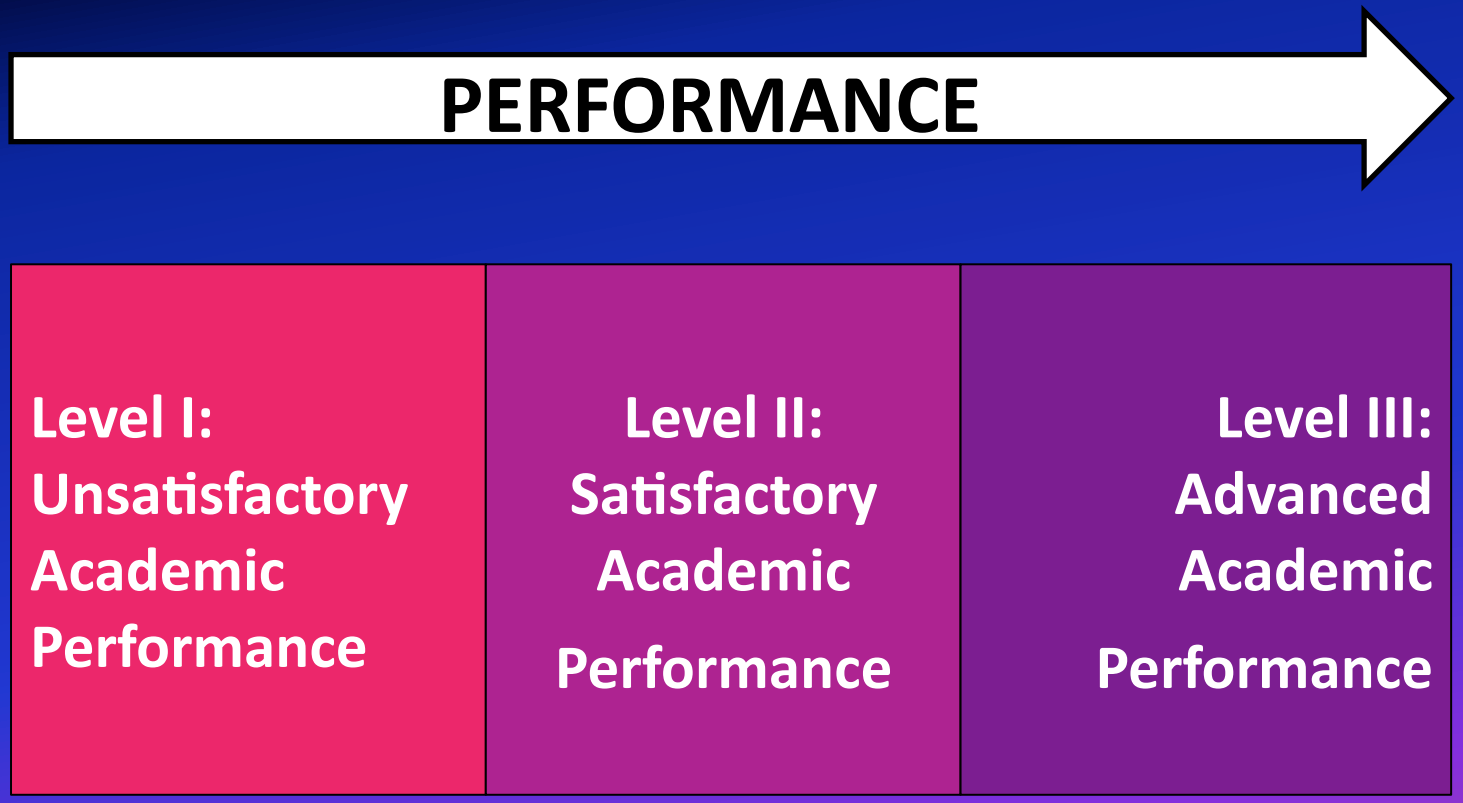
Performance Labels



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Performance Standards for EOC Assessments

- **Standards will be set in February 2012 prior to first high stakes administration in spring 2012.**
- **First reports with performance standards applied will be available in June 2012.**
- **First retests will be offered in July 2012.**

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Performance Standards for Grades 3–8

- **Standards will be set in October 2012 after first administration in spring 2012.**
- **Raw score information will be available in late spring 2012.**
- **First reports with performance standards applied will be available in late fall 2012.**

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Student Success Initiative

- Since performance standards will not be established until October 2012, pass/fail performance on the assessments will not be provided.
- So there will not be retest opportunities (May and June administrations) in 2011–2012.

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Student Success Initiative

- Districts will use other relevant academic information to make promotion/retention decisions.
  - Recommendation of the student's teacher
  - Student's grade in the subject
  - Any other necessary academic information, as determined by the district

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EOC Assessments

- English I, English II, English III
- Algebra I, Geometry, Algebra II
- Biology, Chemistry, Physics
- World Geography, World History, U.S. History

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EOC Assessments

- English III and Algebra II assessments will include a performance standard, Level III: Advanced Academic Performance, that indicates postsecondary readiness.
- Research will be conducted to investigate a postsecondary-readiness component for science and social studies EOC assessments.

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Graduation Requirements

- **Freshman class of 2011–2012 is first group to have EOC assessments as part of their graduation requirement.**

- **All 12 EOC assessments will be available in 2011–2012 in both paper and online modes for these students.**

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Graduation Requirements

- In order to graduate, a student must achieve a cumulative score that is at least equal to the product of the number of EOC assessments taken in that content area and a scale score that indicates satisfactory performance, Level II: Satisfactory Academic Performance.
- For each of the four core content areas, the cumulative score ≥ *n* x passing scale score, where *n* = number of assessments taken.

STAAR

Graduation Requirements

- A student must achieve a minimum score, as determined by the commissioner, for the score to count towards the student's cumulative score.
- A student's cumulative score is determined using the student's highest score on each EOC assessment.

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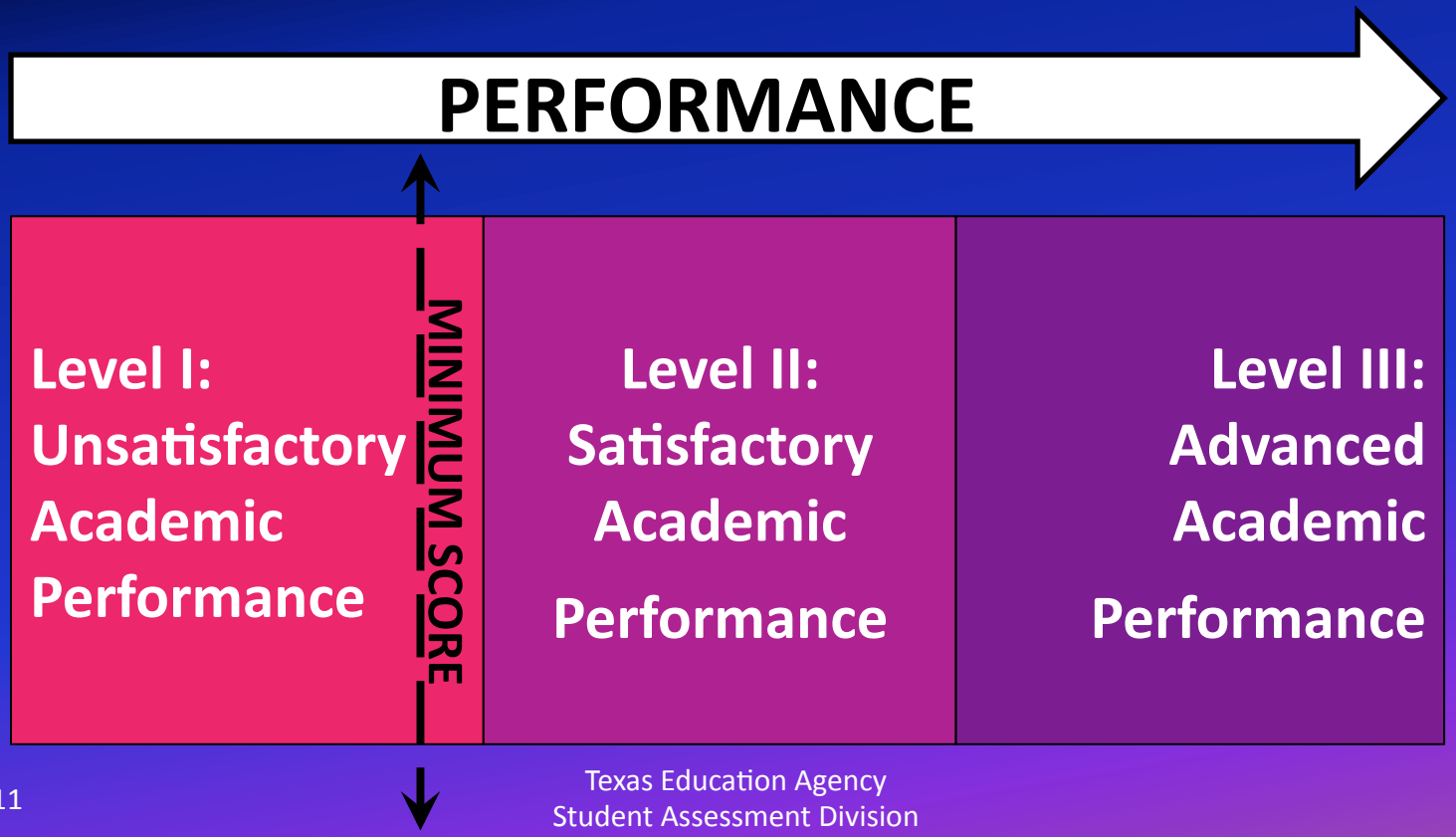
Graduation Requirements

- Students must reach at least the minimum score



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Graduation Requirements for the Distinguished Achievement Program

- **Take all 12 STAAR EOC assessments**
- **Meet cumulative score requirement in each of the four core content areas**
- **Achieve Level III: Advanced Academic Performance (postsecondary readiness) on**
  - **English III**
  - **Algebra II**

STAAR

Graduation Requirements for the Recommended High School Program

- **Take all 12 STAAR EOC assessments**
- **Meet cumulative score requirement in each of the four core content areas**
- **Achieve Level II: Satisfactory Academic Performance on**
  - **English III**
  - **Algebra II**

STAAR

Graduation Requirements for the Minimum High School Program

- **Take STAAR EOC assessments for courses in which they are enrolled and for which an EOC assessment exists (8–12 tests)**
- **Meet cumulative score requirement in each of the four core content areas for courses specifically required on the MHSP (could be as few as 8 tests)**

STAAR

Graduation Requirements

- A student's score on an EOC assessment will be worth 15% of the student's final grade for that course.
- A school district is not required to use the student's score on subsequent administrations to determine the student's final grade for that course.

STAAR

Graduation Requirements

- **In the future, TEA is planning three administrations of EOC assessments each year for**
  - **Students who complete the course at different times of the year**
  - **Retest opportunities**
- **TEA is planning EOC administrations at the end of**
  - **Spring**
  - **Summer**
  - **Fall**

STAAR

Graduation Requirements

- For middle school students who take a high school course (e.g., Algebra I) prior to spring 2012
  - Students would not be required to take that particular EOC assessment. Their cumulative score for that content area would decrease.
  - Students could choose to take that particular EOC assessment in spring 2012 or beyond. If they take the assessment, the score they receive would only be used in their cumulative score if it benefitted the students.

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Graduation Requirements

- For freshman who complete a high school course in fall 2011 (e.g., students on an accelerated block schedule)
  - Students would not be required to take that particular EOC assessment. Their cumulative score for that content area would decrease.
  - Students could choose to take that particular EOC assessment in spring 2012 or beyond. If they take the assessment, the score they receive would only be used in their cumulative score if it benefitted the students.

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Graduation Requirements

- For students who are new to Texas public schools (e.g., from out-of-state, out-of-country, or private schools) and who have earned credit for a high school course that has an EOC assessment associated with it, several options exist including
  - Students would not be required to take that particular EOC assessment. Their cumulative score for that content area would decrease.
  - Students could choose to take that particular EOC assessment. If they take the assessment, the score they receive would only be used in their cumulative score if it benefitted the students.

TAKS to STAAR

Plan for phase-out of TAKS and phase-in of STAAR

	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016
GR 3–8	STAAR	STAAR	STAAR	STAAR	STAAR
GR 9	STAAR	STAAR	STAAR	STAAR	STAAR
GR 10	TAKS	STAAR	STAAR	STAAR	STAAR
GR 11	TAKS	TAKS	STAAR	STAAR	STAAR
GR 12 & Out-of-School Students	TAKS	TAKS	TAKS	STAAR or TAKS	STAAR or TAKS

STAAR

Testing in Spring 2012

- Updated 2011–2012 testing calendar will be posted on the TEA student assessment website at http://www.tea.state.tx.us/student.assessment/calendars/.

- STAAR assessments for grades 3–8 will be administered on paper.

STAAR

Testing in Spring 2012

- STAAR EOC assessments will be administered in both paper and online formats for
  - Middle school students enrolled in high school courses who have STAAR as their graduation requirement
  - First-time grade 9 students who have STAAR as their graduation requirement

STAAR

Testing in Spring 2012

- Middle school students enrolled in a course for which an EOC assessment exists
  - Will not need to take the corresponding grade-level assessment
  - Will need to take the EOC assessment
- For example, a grade 8 student enrolled in Algebra I will take
  - STAAR grade 8 reading
  - STAAR grade 8 science
  - STAAR grade 8 social studies
  - STAAR Algebra I

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Testing in Spring 2012

- First-time grade 9 students will need to take the following STAAR EOC assessments for courses in which they are enrolled.
  - English I, English II, English III
  - Algebra I, Geometry, Algebra II
  - Biology, Chemistry, Physics
  - World Geography, World History, U.S. History
- These students will not take TAKS grade 9 tests as these tests will not be available.

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Testing in Spring 2012

- Repeating grade 9 students will not take TAKS grade 9 tests as these tests will not be available.
- Repeating grade 9 students may take only the STAAR EOC assessments (paper or online) for courses in which their campus has been assigned to the mandatory sample.

STAAR

Testing in Spring 2012

- Grade 10 students will take TAKS grade 10 tests in
  - English Language Arts
  - Mathematics
  - Science
  - Social Studies
- Grade 10 students may take only the STAAR EOC assessments (paper or online) for courses in which their campus has been assigned to the mandatory sample.

STAAR

Testing in Spring 2012

- Grade 11 students will take TAKS exit level tests in
  - English Language Arts
  - Mathematics
  - Science
  - Social Studies
- Grade 11 students may take only the STAAR EOC assessments (paper or online) for courses in which their campus has been assigned to the mandatory sample.

STAAR

Testing in Spring 2012

- Grade 12 students will take the TAKS exit level tests for those subject areas that they have not yet passed.
- Grade 12 students may take only the STAAR EOC assessments (paper or online) for courses in which their campus has been assigned to the mandatory sample.

EOC Assessment Performance

	2005 ALGEBRA I	2006 ALGEBRA I	2007 ALGEBRA I	2008 ALGEBRA I	2009 ALGEBRA I	2010 ALGEBRA I	*2011 ALGEBRA I*
MEAN RAW SCORE	30/50	30/50	30/50	31/50	32/50	31/50	*29/54*
MEAN PERCENT CORRECT	60%	60%	60%	62%	64%	62%	*54%*
NUMBER TESTED	20,844	21,206	32,812	52,462	78,419	101,887	*164,055*

EOC Assessment Performance

	2008 GEOMETRY	2009 GEOMETRY	2010 GEOMETRY	*2011 GEOMETRY*	2011 ALGEBRA II
MEAN RAW SCORE	23/44	23/44	23/44	*25/52*	22/50
MEAN PERCENT CORRECT	52%	52%	52%	*48%*	44%
NUMBER TESTED	31,127	47,271	137,617	*105,646*	73,714

For More Information…

- Look at the House Bill 3 Transition Plan at http://www.tea.state.tx.us/student.assessment/hb3plan/
- Sign-up for the listserv at http://miller.tea.state.tx.us/list/index.html
- Contact us by e-mail at student.assessment@tea.state.tx.us
- Contact us by phone at 512-463-9536

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