

# ZOOM Virtual Meeting Norms

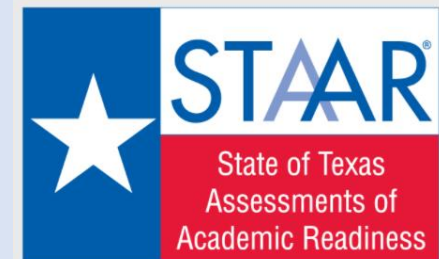
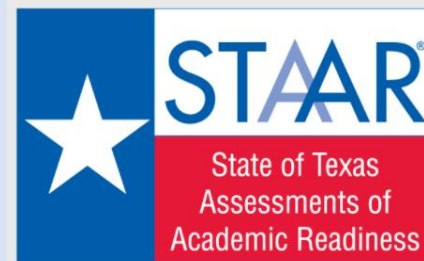
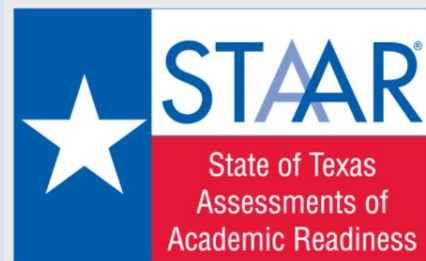
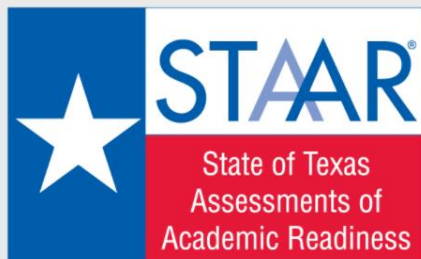
- Workshop #158286 ALL HANDOUTS are uploaded
- Remote Check In – TRSM8 (case sensitive)
- Check your audio and video.
- Keep microphone muted to minimize distraction.
- Questions can be asked in the ZOOM Chat at any point.

# TRS Sixth Six Weeks Planning Session

## STAAR Focus

March 29, 2021

**8<sup>th</sup> Gr. TRS Math Inst. Planning**  
**6<sup>th</sup> Six Weeks – STAAR**  
**Workshop # 158286**  
**2:30 PM -4:30 PM**





## Today's Agenda:

Data Review

Instructional Gap Considerations

Mastering What's Essential

Item Analysis of Student Responses

STAAR Instructional Resources



# Learning Loss Research

## *Key Findings and Takeaways*

### Learning Loss

- Did not see blanket declines as forecasted.
- Still a lack of current data on most vulnerable student populations.
- Schools need local data to get students on track.
- Schools traditionally balance inequities.
- Differing summer experiences can make an impact.

### Gaps

- Gaps increase in upper elementary and middle school.
- Gaps are greater in mathematics than reading.

**What some key findings and takeaways for the learning loss research?**

### Recommendations

- Academic content that complements curricular standards and is taught by at least one experienced, trained teacher per classroom
- Academic classes that are limited to 15 students, with at least two adults (one lead teacher and one teaching assistant, for example)
- Group learning that is complemented with individual support
- Fun and engaging activities that are used to teach concepts
- Hands-on activities that are used to teach concepts
- Concepts that are grounded in a real-world context

Note: Voluntary Summer Reading Programs did not work



# What does the data say?

**STAAR Longitudinal by SE for Region 01**

Source: Admin Year: 2019 Subject: Mathematics Demographic Group(s): All Students  
 Test Version(s): STAAR Language(s): English Calculation Option: Calculated average Rereads: First Administrations

SE	Grade 07 2017	Grade 07 2018	Grade 07 2019
SE 7.1A - apply mathematics to problems arising in everyday life, society, and the workplace (P)			
SE 7.1B - use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution (P)			
SE 7.1C - select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems (P)			
SE 7.1D - communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate (P)			
SE 7.1E - create and use representations to organize, record, and communicate mathematical ideas (P)			
SE 7.1F - analyze mathematical relationships to connect and communicate mathematical ideas (P)			
SE 7.1G - display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication (P)			
SE 7.2A - extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of rational numbers (S)		74%	61%
SE 7.3A - add, subtract, multiply, and divide rational numbers fluently (S)	57%	61%	55%
SE 7.3B - apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers (R)	48%	44%	65%
SE 7.4A - represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including $d = rt$ (R)	60%	71%	66%
SE 7.4B - calculate unit rates from rates in mathematical and real-world problems (S)	72%		52%
SE 7.4C - determine the constant of proportionality ( $k = y/x$ ) within mathematical and real-world problems (S)		86%	56%
SE 7.4D - solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems (R)	52%	50%	57%
SE 7.4E - convert between measurement systems, including the use of proportions and the use of unit rates (S)	38%	70%	76%
SE 7.5A - generalize the critical attributes of similarity, including ratios within and between similar shapes (S)	40%	61%	65%
SE 7.5B - describe pi as the ratio of the circumference of a circle to its diameter (S)		62%	55%
SE 7.5C - solve mathematical and real-world problems involving similar shape and scale drawings (R)	65%	55%	50%
SE 7.6A - represent sample spaces for simple and compound events using lists and tree diagrams (S)		72%	

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**STAAR Longitudinal by SE for Region 01**

Source: Admin Year: 2019 Subject: Mathematics Demographic Group(s): All Students  
 Test Version(s): STAAR Language(s): English Calculation Option: Calculated average Rereads: First Administrations

SE	Grade 07 2017	Grade 07 2018	Grade 07 2019
SE 7.6C - make predictions and determine solutions using experimental data for simple and compound events (S)	38%		47%
SE 7.6D - make predictions and determine solutions using theoretical probability for simple and compound events (S)	46%		
SE 7.6E - find the probabilities of a simple event and its complement and describe the relationship between the two (S)			
SE 7.6G - solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents (R)	51%	53%	43%
SE 7.6H - solve problems using qualitative and quantitative predictions and comparisons from simple experiments (R)	62%	53%	55%
SE 7.6I - determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces (R)	45%	54%	62%
SE 7.7A - represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form $y = mx + b$ (R)	64%	59%	61%
SE 7.8A - solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids (R)	42%	56%	67%
SE 7.8B - determine the circumference and area of circles (R)	52%	59%	66%
SE 7.8C - determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles (R)	51%	45%	38%
SE 7.8D - solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid by determining the area of the shape's net (S)	44%		45%
SE 7.10A - write one-variable, two-step equations and inequalities to represent constraints or conditions within problems (S)	51%		
SE 7.10B - represent solutions for one-variable, two-step equations and inequalities on number lines (S)		43%	54%
SE 7.10C - write a corresponding real-world problem given a one-variable, two-step equation or inequality (S)	50%	45%	
SE 7.11A - model and solve one-variable, two-step equations and inequalities (R)	57%	52%	59%
SE 7.11B - determine if the given value(s) make(s) one-variable, two-step equations and inequalities true (S)	64%	38%	33%
SE 7.11C - write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships (S)	39%	40%	
SE 7.12A - compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads (R)	61%	56%	59%
SE 7.12B - use data from a random sample to make inferences about a population (S)		46%	79%

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# STAAR Longitudinal by SE for Region 01

Source: Admin Year: 2019 Subject: Mathematics Demographic Group(s): All Students  
Test Version(s): STAAR Language(s): English Calculation Option: Calculated average R

**Study the data on slides 6 & 7.  
What do you notice?**

SE	Grade 08		
	2017	2018	2019
SE 8.2A - extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers (S)		57%	
SE 8.2B - approximate the value of an irrational number, including $\sqrt{?}$ and square roots of numbers less than 225, and locate that rational number approximation on a number line (S)	30%	76%	88%
SE 8.2C - convert between standard decimal notation and scientific notation (S)	59%		77%
SE 8.2D - order a set of real numbers arising from mathematical and real-world contexts (R)	74%	72%	64%
SE 8.3A - generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation (S)	49%	58%	69%
SE 8.3B - compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane (S)	67%		
SE 8.3C - use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation (R)	50%	56%	45%
SE 8.4A - use similar right triangles to develop an understanding that slope, $m$ , given as the rate comparing the change in $y$ -values to the change in $x$ -values, $(y_2 - y_1) / (x_2 - x_1)$ , is the same for any two points $(x_1, y_1)$ and $(x_2, y_2)$ on the same line (S)	42%		64%
SE 8.4B - graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship (R)	81%	58%	70%
SE 8.4C - use data from a table or graph to determine the rate of change or slope and $y$ -intercept in mathematical and real-world problems (R)	76%	59%	54%
SE 8.5A - represent linear proportional situations with tables, graphs, and equations in the form of $y = kx$ (S)	57%	53%	86%
SE 8.5B - represent linear non-proportional situations with tables, graphs, and equations in the form of $y = mx + b$ , where $b \neq 0$ (S)		58%	
SE 8.5C - contrast bivariate sets of data that suggest a linear relationship with bivariate sets of data that do not suggest a linear relationship from a graphical representation (S)		78%	84%
SE 8.5D - use a trend line that approximates the linear relationship between bivariate sets of data to make predictions (R)	55%	59%	56%
SE 8.5E - solve problems involving direct variation (S)	61%	67%	
SE 8.5F - distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form $y = kx$ or $y = mx + b$ , where $b \neq 0$ (S)	88%		81%
SE 8.5G - identify functions using sets of ordered pairs, tables, mappings, and graphs (R)	69%	67%	74%
SE 8.5H - identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems (S)		60%	



# STAAR Longitudinal by SE for Region 01

Source: Admin Year: 2019 Subject: Mathematics Demographic Group(s): All Students  
 Test Version(s): STAAR Language(s): English Calculation Option: Calculated average F

**Study the data on slides 6 & 7.  
 What do you notice?**

	Grade 08	Grade 08	Grade 08
SE 8.5I - write an equation in the form $y = mx + b$ to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations (R)	68%	65%	60%
SE 8.6A - describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height (S)	67%	77%	75%
SE 8.6C - use models and diagrams to explain the Pythagorean theorem (S)	50%		73%
SE 8.7A - solve problems involving the volume of cylinders, cones, and spheres (R)	61%	74%	57%
SE 8.7B - use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders (R)	51%	63%	59%
SE 8.7C - use the Pythagorean Theorem and its converse to solve problems (R)	68%	63%	45%
SE 8.7D - determine the distance between two points on a coordinate plane using the Pythagorean Theorem (S)	47%	59%	
SE 8.8A - write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants (S)	69%	76%	55%
SE 8.8B - write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants (S)		68%	70%
SE 8.8C - model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants (R)	54%	73%	60%
SE 8.8D - use informal arguments to establish facts about the angle sum and exterior angle of triangles, the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles (S)		67%	64%
SE 8.9A - identify and verify the values of $x$ and $y$ that simultaneously satisfy two linear equations in the form $y = mx + b$ from the intersections of the graphed equations (S)	84%		73%
SE 8.10A - generalize the properties of orientation and congruence of rotations, reflections, translations, and dilations of two-dimensional shapes on a coordinate plane (S)		63%	
SE 8.10B - differentiate between transformations that preserve congruence and those that do not (S)			
SE 8.10C - explain the effect of translations, reflections over the $x$ - or $y$ -axis, and rotations limited to $90^\circ$ , $180^\circ$ , $270^\circ$ , and $360^\circ$ as applied to two-dimensional shapes on a coordinate plane using an algebraic representation (R)	66%	54%	61%
SE 8.10D - model the effect on linear and area measurements of dilated two-dimensional shapes (S)			71%
SE 8.11A - construct a scatterplot and describe the observed data to address questions of association such as linear, non-linear, and no association between bivariate data (S)	70%		66%
SE 8.11B - determine the mean absolute deviation and use this quantity as a measure of the average distance data are from the mean using a data set of no more than 10 data points (S)		49%	



# STAAR Longitudinal by SE for Region 01

Source: Admin Year: 2019 Subject: Mathematics Demographic Group(s): All Students  
Test Version(s): STAAR Language(s): English Calculation Option: Calculated average Retests:

**Study the data on slides 6 & 7.  
What do you notice?**

	Grade 08	Grade 08	Grade 08
SE 8.12A - solve real-world problems comparing how interest rate and loan length affect the cost of credit (S)	56%		79%
SE 8.12C - explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time (S)			
SE 8.12D - calculate and compare simple interest and compound interest earnings (R)	56%	62%	41%
SE 8.12G - estimate the cost of a two-year and four-year college education, including family contribution, and devise a periodic savings plan for accumulating the money needed to contribute to the total cost of attendance for at least the first year of college (S)	37%	63%	

Testing Standard	approaches gr lvl	approaches gr lvl	approaches gr lvl
Students Tested	23844	23552	23478
# Met Standard	17888	18782	19287
% Met Standard	75%	80%	82%
Average Scale Score	1679	1707	1710



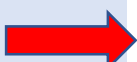


# STAAR Longitudinal by SE for Region 01

Source: Admin Year: 2019 Subject: Mathematics Demographic Group(s): All  
Test Version(s): STAAR Language(s): English Calculation Option: Calculated average

**Study the data on slides 6 & 7.  
What do you notice?**

SE	Grade 08		
	2017	2018	2019
SE 8.2A - extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers (S)		57%	
SE 8.2B - approximate the value of an irrational number, including $\sqrt{?}$ and square roots of numbers less than 225, and locate that rational number approximation on a number line (S)	30%	76%	88%
SE 8.2C - convert between standard decimal notation and scientific notation (S)	59%		77%
SE 8.2D - order a set of real numbers arising from mathematical and real-world contexts (R)	74%	72%	64%
SE 8.3A - generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation (S)	49%	58%	69%
SE 8.3B - compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane (S)	67%		
SE 8.3C - use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation (R)	50%	56%	45%
SE 8.4A - use similar right triangles to develop an understanding that slope, $m$ , given as the rate comparing the change in $y$ -values to the change in $x$ -values, $(y_2 - y_1)/(x_2 - x_1)$ , is the same for any two points $(x_1, y_1)$ and $(x_2, y_2)$ on the same line (S)	42%		64%
SE 8.4B - graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship (R)	81%	58%	70%
SE 8.4C - use data from a table or graph to determine the rate of change or slope and $y$ -intercept in mathematical and real-world problems (R)	76%	59%	54%
SE 8.5A - represent linear proportional situations with tables, graphs, and equations in the form of $y = kx$ (S)	57%	53%	86%
SE 8.5B - represent linear non-proportional situations with tables, graphs, and equations in the form of $y = mx + b$ , where $b \neq 0$ (S)		58%	
SE 8.5C - contrast bivariate sets of data that suggest a linear relationship with bivariate sets of data that do not suggest a linear relationship from a graphical representation (S)		78%	84%
SE 8.5D - use a trend line that approximates the linear relationship between bivariate sets of data to make predictions (R)	55%	59%	56%
SE 8.5E - solve problems involving direct variation (S)	61%	67%	
SE 8.5F - distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form $y = kx$ or $y = mx + b$ , where $b \neq 0$ (S)	88%		81%
SE 8.5G - identify functions using sets of ordered pairs, tables, mappings, and graphs (R)	69%	67%	74%
SE 8.5H - identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems (S)		60%	





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SE 8.5I - write an equation in the form $y = mx + b$ to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations (R)	68%	65%	60%
SE 8.6A - describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height (S)	67%	77%	75%
SE 8.6C - use models and diagrams to explain the Pythagorean theorem (S)	50%		73%
SE 8.7A - solve problems involving the volume of cylinders, cones, and spheres (R)	61%	74%	57%
SE 8.7B - use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders (R)	51%	63%	59%
SE 8.7C - use the Pythagorean Theorem and its converse to solve problems (R)	68%	63%	45%
SE 8.7D - determine the distance between two points on a coordinate plane using the Pythagorean Theorem (S)	47%	59%	
SE 8.8A - write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants (S)	69%	76%	55%
SE 8.8B - write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants (S)		68%	70%
SE 8.8C - model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants (R)	54%	73%	60%
SE 8.8D - use informal arguments to establish facts about the angle sum and exterior angle of triangles, the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles (S)		67%	64%
SE 8.9A - identify and verify the values of $x$ and $y$ that simultaneously satisfy two linear equations in the form $y = mx + b$ from the intersections of the graphed equations (S)	84%		73%
SE 8.10A - generalize the properties of orientation and congruence of rotations, reflections, translations, and dilations of two-dimensional shapes on a coordinate plane (S)		63%	
SE 8.10B - differentiate between transformations that preserve congruence and those that do not (S)			
SE 8.10C - explain the effect of translations, reflections over the $x$ - or $y$ -axis, and rotations limited to $90^\circ$ , $180^\circ$ , $270^\circ$ , and $360^\circ$ as applied to two-dimensional shapes on a coordinate plane using an algebraic representation (R)	66%	54%	61%
SE 8.10D - model the effect on linear and area measurements of dilated two-dimensional shapes (S)			71%
SE 8.11A - construct a scatterplot and describe the observed data to address questions of association such as linear, non-linear, and no association between bivariate data (S)	70%		66%
SE 8.11B - determine the mean absolute deviation and use this quantity as a measure of the average distance data are from the mean using a data set of no more than 10 data points (S)		49%	



# STAAR Longitudinal by SE for Region 01


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**Study the data on slides 6 & 7.  
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SE 8.12C - explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time (S)			
SE 8.12D - calculate and compare simple interest and compound interest earnings (R)	56%	62%	41%
SE 8.12G - estimate the cost of a two-year and four-year college education, including family contribution, and devise a periodic savings plan for accumulating the money needed to contribute to the total cost of attendance for at least the first year of college (S)	37%	63%	

Testing Standard	approaches gr lvl	approaches gr lvl	approaches gr lvl
Students Tested	23844	23552	23478
# Met Standard	17888	18782	19287
% Met Standard	75%	80%	82%
Average Scale Score	1679	1707	1710

# Digging Deeper into the Data



	Grade 08	Grade 08	Grade 08
SE 8.5I - write an equation in the form $y = mx + b$ to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations (R)	68%	65%	60%
SE 8.6A - describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height (S)	67%	77%	75%
SE 8.6C - use models and diagrams to explain the Pythagorean theorem (S)	50%		73%
SE 8.7A - solve problems involving the volume of cylinders, cones, and spheres (R)	61%	74%	57%
SE 8.7B - use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders (R)	51%	63%	59%
SE 8.7C - use the Pythagorean Theorem and its converse to solve problems (R)	68%	63%	45%
SE 8.7D - determine the distance between two points on a coordinate plane using the Pythagorean Theorem (S)	47%	59%	
SE 8.8A - write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants (S)	69%	76%	55%

**TEKS: 8.5I, 8.7B, 8.7C**

# How can we close some gaps?

## Grade 8 Mathematics COVID-19 Gap Implementation Tool Potential Gap Considerations for 2020-2021 School Year *(applicable standards only)*

### Quick Key to Reading the Mathematics COVID-19 Gap Implementation Tool

<b>Strikethrough(s)</b>	Strikethrough(s) in the previous grade level <b>Last 9 Weeks Standards</b> column reflect the strikethrough(s) that appear in the previous grade level Unit IFD during the last 9 weeks. This strikethrough(s) indicates the part of the SE that was not included in the hyperlinked previous grade level unit.  Strikethrough(s) in the current grade level <b>Aligned Standards</b> column reflect the strikethrough(s) that appear in the current grade level Unit IFD. This strikethrough(s) indicates the part of the SE that is not included in the current grade level unit where the gap is being considered.  While the standards in each row of the table are vertically aligned, any strikethroughs are not necessarily vertically aligned.
<b>Underlines</b>	<b>No underline</b> indicates the standard was completely taught prior to the 4 <sup>th</sup> nine weeks.  <b>Underline</b> indicates the standard or part of the standard was not taught prior to the 4 <sup>th</sup> nine weeks.
<b>Xs</b>	An X in a column <b>with</b> a previous grade level hyperlink indicates the current grade level unit in which all of the current grade level standards in the row occur and where the gap considerations from the previous grade level impact the current unit.  An X in a column <b>without</b> a previous grade level hyperlink indicates where all or some of the current grade level standards in the row occur in the scope and sequence.
<b>Hyperlinks</b>	A hyperlink to the previous grade level Unit IFD along with the previous grade level standards allows for quick access to view the specificity of the previous grade level standard(s) that includes a potential gap.
<b>Alternating Shading</b>	Alternating white and gray shading allows for easy visualization of a change in unit number.

For complete instruction on how to read this tool, see the [Mathematics COVID-19 Gap Implementation Tool Instructions](#).

		2020–2021 School Year Grade 8 Units Reflected on Year at a Glance (YAG)											
Grade 7 Last 9 Weeks Standards 2019–2020	Grade 8 Aligned Standards 2020–2021	Unit 01	Unit 02	Unit 03	Unit 04	Unit 05	Unit 06	Unit 07	Unit 08	Unit 09	Unit 10	Unit 11	Unit 12
There are no additional COVID-19 gap considerations from the previous grade level for this unit.		X											
<b>District notes:</b> [ ]													
There are no additional COVID-19 gap considerations from the previous grade level for this unit.			X										
<b>District notes:</b> [ ]													
7.10A Write one-variable, two-step equations and inequalities to represent constraints or conditions within problems. <i>Supporting Standard</i>	8.8A Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants. <i>Supporting Standard</i>			X <a href="#">G7U11</a> 7.10A									
<b>Considerations:</b> Although students may have been taught 7.10A, they may not have had the opportunity to solidify the foundational understandings to prepare them for 8.8A. Grade 8 teachers should be prepared to: • Pre-assess students' understanding of writing one-variable, two-step equations and inequalities with the variable on one side of the equation or inequality prior to writing one-variable, two-step equations and inequalities with variables on both sides of the equation or inequality.													
<b>District notes:</b> [ ]													
7.10C Write a corresponding real-world problem given a one-variable, two-step equation or inequality. <i>Supporting Standard</i>	8.8B Write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants. <i>Supporting Standard</i>			X <a href="#">G7U11</a> 7.10C									
<b>Considerations:</b> Although students may have been taught 7.10C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 8.8B. Grade 8 teachers should be prepared to: • Pre-assess students' understanding of writing a corresponding real-world problem given a one-variable, two-step equation or inequality with the variable on one side of the equation or inequality prior to writing a corresponding real-world problem given a one-variable, two-step equation or inequality with variables on both sides of the equation or inequality.													
<b>District notes:</b> [ ]													

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Grade 8

Mathematics

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
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**Grade 8 Mathematics COVID-19 Gap Implementation Tool**  
**Potential Gap Considerations for 2020-2021 School Year** *(applicable standards only)*

**Quick Key to Reading the Mathematics COVID-19 Gap Implementation Tool**

<b>Strikethrough(s)</b>	<p>Strikethrough(s) in the previous grade level <b>Last 9 Weeks Standards</b> column reflect the strikethrough(s) that appear in the previous grade level Unit IFD during the last 9 weeks. This strikethrough(s) indicates the part of the SE that was not included in the hyperlinked previous grade level unit.</p> <p>Strikethrough(s) in the current grade level <b>Aligned Standards</b> column reflect the strikethrough(s) that appear in the current grade level Unit IFD. This strikethrough(s) indicates the part of the SE that is not included in the current grade level unit where the gap is being considered.</p> <p>While the standards in each row of the table are vertically aligned, any strikethroughs are not necessarily vertically aligned.</p>
<b>Underlines</b>	<p><b>No underline</b> indicates the standard was completely taught prior to the 4<sup>th</sup> nine weeks.</p> <p><b>Underline</b> indicates the standard or part of the standard was not taught prior to the 4<sup>th</sup> nine weeks.</p>
<b>Xs</b>	<p>An X in a column <b>with</b> a previous grade level hyperlink indicates the current grade level unit in which all of the current grade level standards in the row occur and where the gap considerations from the previous grade level impact the current unit.</p> <p>An X in a column <b>without</b> a previous grade level hyperlink indicates where all or some of the current grade level standards in the row occur in the scope and sequence.</p>
<b>Hyperlinks</b>	<p>A hyperlink to the previous grade level Unit IFD along with the previous grade level standards allows for quick access to view the specificity of the previous grade level standard(s) that includes a potential gap.</p>
<b>Alternating Shading</b>	<p>Alternating white and gray shading allows for easy visualization of a change in unit number.</p>




For complete instruction on how to read this tool, see the [Mathematics COVID-19 Gap Implementation Tool Instructions](#).



## 2020–2021 School Year Grade 8 Units Reflected on Year at a Glance (YAG)

Grade 7 Last 9 Weeks Standards 2019-2020	Grade 8 Aligned Standards 2020-2021	Unit 01	Unit 02	Unit 03	Unit 04	Unit 05	Unit 06	Unit 07	Unit 08	Unit 09	Unit 10	Unit 11	Unit 12
There are no additional COVID-19 gap considerations from the previous grade level for this unit.		X											
District notes: [ ]													
There are no additional COVID-19 gap considerations from the previous grade level for this unit.			X										
District notes: [ ]													
<b>7.10A</b> Write one-variable, two-step equations and inequalities to represent constraints or conditions within problems. <i>Supporting Standard</i>	<b>8.8A</b> Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants. <i>Supporting Standard</i>			X  G7U11 7.10A									
<b>Considerations:</b> Although students may have been taught 7.10A, they may not have had the opportunity to solidify the foundational understandings to prepare them for 8.8A. Grade 8 teachers should be prepared to: <ul style="list-style-type: none"> <li>Pre-assess students' understanding of writing one-variable, two-step equations and inequalities with the variable on one side of the equation or inequality prior to writing one-variable, two-step equations and inequalities with variables on both sides of the equation or inequality.</li> </ul>													
District notes: [ ]													
<b>7.10C</b> Write a corresponding real-world problem given a one-variable, two-step equation or inequality. <i>Supporting Standard</i>	<b>8.8B</b> Write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants. <i>Supporting Standard</i>			X  G7U11 7.10C									
<b>Considerations:</b> Although students may have been taught 7.10C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 8.8B. Grade 8 teachers should be prepared to: <ul style="list-style-type: none"> <li>Pre-assess students' understanding of writing a corresponding real-world problem given a one-variable, two-step equation or inequality with the variable on one side of the equation or inequality prior to writing a corresponding real-world problem given a one-variable, two-step equation or inequality with variables on both sides of the equation or inequality.</li> </ul>													
District notes: [ ]													

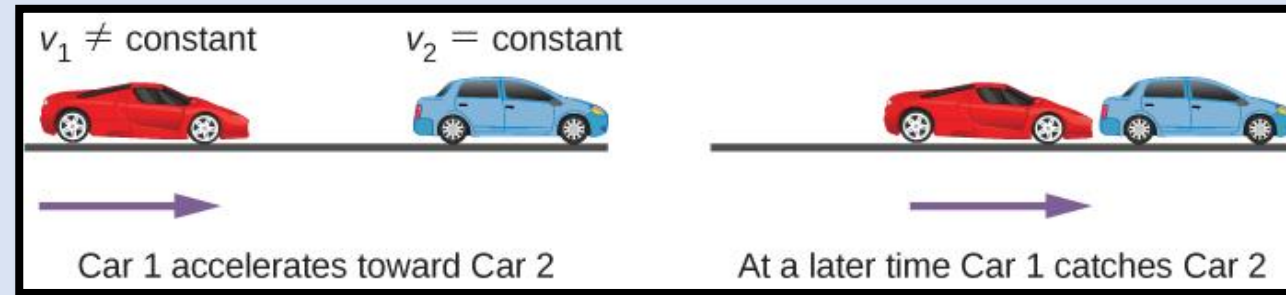
## 2020–2021 School Year Grade 8 Units Reflected on Year at a Glance (YAG)

Grade 7 Last 9 Weeks Standards 2019-2020	Grade 8 Aligned Standards 2020-2021	Unit 01	Unit 02	Unit 03	Unit 04	Unit 05	Unit 06	Unit 07	Unit 08	Unit 09	Unit 10	Unit 11	Unit 12
There are no additional COVID-19 gap considerations from the previous grade level for this unit.		X											
District notes: [ ] 													
There are no additional COVID-19 gap considerations from the previous grade level for this unit.			X										
District notes: [ ] 													
<b>7.10A</b> Write one-variable, two-step equations and inequalities to represent constraints or conditions within problems. <i>Supporting Standard</i>	<b>8.8A</b> Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants. <i>Supporting Standard</i>			<b>X</b>  <a href="#">G7U11</a> <a href="#">7.10A</a>									
<b>Considerations:</b> Although students may have been taught 7.10A, they may not have had the opportunity to solidify the foundational understandings to prepare them for 8.8A. Grade 8 teachers should be prepared to: <ul style="list-style-type: none"> <li>Pre-assess students' understanding of writing one-variable, two-step equations and inequalities with the variable on one side of the equation or inequality prior to writing one-variable, two-step equations and inequalities with variables on both sides of the equation or inequality.</li> </ul>													
District notes: [ ] 													
<b>7.10C</b> Write a corresponding real-world problem given a one-variable, two-step equation or inequality. <i>Supporting Standard</i>	<b>8.8B</b> Write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants. <i>Supporting Standard</i>			<b>X</b>  <a href="#">G7U11</a> <a href="#">7.10C</a>									
<b>Considerations:</b> Although students may have been taught 7.10C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 8.8B. Grade 8 teachers should be prepared to: <ul style="list-style-type: none"> <li>Pre-assess students' understanding of writing a corresponding real-world problem given a one-variable, two-step equation or inequality with the variable on one side of the equation or inequality prior to writing a corresponding real-world problem given a one-variable, two-step equation or inequality with variables on both sides of the equation or inequality.</li> </ul>													
District notes: [ ]													

# Guidance from the Agency



## Accelerating Instruction **Covering all standards**



## Leveraging the Standards

**Mastering what is essential.**

# Heat Map

## Targeted Student Support for Maximizing Results

8th STAAR Math Student Profile

Student Name: \_\_\_\_\_

Period: \_\_\_\_\_

Critical
Important
As time permits

Cate.	TEKS	R or S	Student Expectation	Basic	Basic	Interm	Interm	Interm	Adv.	Adv.
1	8.2A	S	Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers							
1	8.2B	S	Approximate the value of an irrational number, including $\pi$ and square roots of numbers less than 225, and locate that rational number approximation on a number line							
1	8.2C	S	Convert between standard decimal notation and scientific notation							
1	8.2D	R	Order a set of real numbers arising from mathematical and real-world contexts							
2	8.4A	S	Use similar right triangles to develop an understanding that slope, $m$ , given as the rate comparing the change in $y$ -values to the change in $x$ -values, $(y_2 - y_1) / (x_2 - x_1)$ , is the same for any two points $(x_1, y_1)$ and $(x_2, y_2)$ on the same line							
2	8.4B	R	Graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship							
2	8.4C	R	Use data from a table or graph to determine the rate of change or slope and $y$ -intercept in mathematical and real-world problems							
2	8.5A	S	Represent linear proportional situations with tables, graphs, and equations in the form of $y = kx$							
2	8.5B	S	Represent linear non-proportional situations with tables, graphs, and equations in the form of $y = mx + b$ , where $b \neq 0$							
2	8.5E	S	Solve problems involving direct variation							

Cate.	TEKS	R or S	Student Expectation	Basic	Basic	Interm	Interm	Interm	Adv.	Adv.
2	8.5F	S	Distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form $y = kx$ or $y = mx + b$ , where $b \neq 0$							
2	8.5G	R	Identify functions using sets of ordered pairs, tables, mappings, and graphs							
2	8.5H	S	Identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems							
2	8.5I	R	Write an equation in the form $y = mx + b$ to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations							
2	8.8A	S	Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants							
2	8.8B	S	Write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants							
2	8.8C	R	Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants							
2	8.9A	S	Identify and verify the values of $x$ and $y$ that simultaneously satisfy two linear equations in the form $y = mx + b$ from the intersections of the graphed equations							
3	8.3A	S	Generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation							
3	8.3B	S	Compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane							
3	8.3C	R	Use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation							
3	8.6A	S	Describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height							

Study the Heat Map: What implications are there for the red shaded standards?

# Heat Map

## Targeted Student Support for Maximizing Results

### 8th STAAR Math Student Profile

Student Name: \_\_\_\_\_

Period: \_\_\_\_\_


	Critical
	Important
	As time permits

Cate.	TEKS	R or S	Student Expectation	Basic	Basic	Interm	Interm	Interm	Adv.	Adv.
1	8.2A	S	Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers							
1	8.2B	S	Approximate the value of an irrational number, including $\pi$ and square roots of numbers less than 225, and locate that rational number approximation on a number line							
1	8.2C	S	Convert between standard decimal notation and scientific notation							
1	8.2D	R	Order a set of real numbers arising from mathematical and real-world contexts							
2	8.4A	S	Use similar right triangles to develop an understanding that slope, $m$ , given as the rate comparing the change in $y$ -values to the change in $x$ -values, $(y_2 - y_1)/(x_2 - x_1)$ , is the same for any two points $(x_1, y_1)$ and $(x_2, y_2)$ on the same line							
2	8.4B	R	Graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship							
2	8.4C	R	Use data from a table or graph to determine the rate of change or slope and $y$ -intercept in mathematical and real-world problems							
2	8.5A	S	Represent linear proportional situations with tables, graphs, and equations in the form of $y = kx$							
2	8.5B	S	Represent linear non-proportional situations with tables, graphs, and equations in the form of $y = mx + b$ , where $b \neq 0$							
2	8.5E	S	Solve problems involving direct variation							

# Heat Map



Cate.	TEKS	R or S	Student Expectation	Basic	Basic	Interm	Interm	Interm	Adv.	Adv.
2	8.5F	S	Distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form $y = kx$ or $y = mx + b$ , where $b \neq 0$							
2	8.5G	R	Identify functions using sets of ordered pairs, tables, mappings, and graphs							
2	8.5H	S	Identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems							
2	8.5I	R	Write an equation in the form $y = mx + b$ to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations							
2	8.8A	S	Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants							
2	8.8B	S	Write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants							
2	8.8C	R	Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants							
2	8.9A	S	Identify and verify the values of $x$ and $y$ that simultaneously satisfy two linear equations in the form $y = mx + b$ from the intersections of the graphed equations							
3	8.3A	S	Generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation							
3	8.3B	S	Compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane							
3	8.3C	R	Use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation							
3	8.6A	S	Describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height							

# Digging Deeper into the Data



	Grade 08	Grade 08	Grade 08
SE 8.5I - write an equation in the form $y = mx + b$ to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations (R)	68%	65%	60%
SE 8.6A - describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height (S)	67%	77%	75%
SE 8.6C - use models and diagrams to explain the Pythagorean theorem (S)	50%		73%
SE 8.7A - solve problems involving the volume of cylinders, cones, and spheres (R)	61%	74%	57%
SE 8.7B - use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders (R)	51%	63%	59%
SE 8.7C - use the Pythagorean Theorem and its converse to solve problems (R)	68%	63%	45%
SE 8.7D - determine the distance between two points on a coordinate plane using the Pythagorean Theorem (S)	47%	59%	
SE 8.8A - write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants (S)	69%	76%	55%

**TEKS: 8.5I, 8.7B, 8.7C**



STAAR® Test	Grade 8 M	Item #	26	Content SE	8.7B	SE Type	Readiness
Administration	Spring 2019	Reporting Category	3	Process SE	Not Reported	Unit (IFD)	09

**26** A can in the shape of a cylinder has a diameter of 6 centimeters and a height of 10 centimeters. Which measurement is closest to the total surface area of the can in square centimeters?

F 603.19 cm<sup>2</sup>

G 245.04 cm<sup>2</sup>

H 376.99 cm<sup>2</sup>

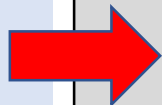
J 188.50 cm<sup>2</sup>

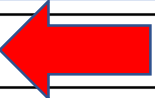
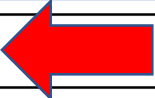
TEKS: 8.7B



**Elements Considered in TEKS Resource System™ Item Analysis**

	Texas Education Agency Rationale	OPTIONS ANALYSIS			
		State			
A/F	The student likely used the diameter as the radius in the surface area formula, $S = 2\pi(6)(10) + 2\pi(6)^2$ . The student needs to focus on correctly identifying the parts of the formula and how they are related to the figure.	9			
B/G	Correct – To determine the total surface area (total area of the surfaces of a three-dimensional figure) of the can, the student should have used the formula for the total surface area of a cylinder, $S = 2\pi rh + 2\pi r^2$ , in which $r$ represents the radius (distance from the center to the circumference of a circle) and $h$ represents the height (vertical distance from top to bottom) of the can. To determine the value of $r$ , the student should have divided the given diameter (straight line going through the center of a circle connecting two points on the circumference), 6, by 2, resulting in $r = 3$ . Substituting the given values, the student should have evaluated $S = 2\pi(3)(10) + 2\pi(3)^2$ , which is approximately equal to 245.04. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.	74*			
C/H	The student likely used the diameter as the radius in the lateral surface area formula, $S = 2\pi(6)(10)$ . The student needs to focus on understanding and properly applying the formula for determining the total surface area of a figure and correctly identifying the parts of the formula and how they are related to the figure.	7			
D/J	The student likely used the lateral surface area formula, $S = 2\pi rh$ . The student needs to focus on understanding and properly applying the formula for determining the total surface area of a figure and correctly identifying the parts of the formula and how they are related to the figure.	9			



Stimulus Type	Problem Situation	Revised Bloom's	Apply 	DOK	Level 1 
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<b>Content KS Standard</b>	<b><i>8.7 Expressions, equations, and relationships. The student applies mathematical process standards to use geometry to solve problems. The student is expected to:</i></b>
Content SE Standard	8.7B Use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders.
Content SE Breakout	8.7B Use previous knowledge of surface area to make connections to the formulas for total surface area and determine solutions for problems involving cylinders.

TEKS Resource  
System™ Notes

- Vocabulary – total surface area; cylinder; radius; diameter; height; circumference (perimeter); area of the base; measurement; dimensions; centimeters (cm); square centimeters (cm<sup>2</sup>);
- Understand how to determine the circumference (perimeter) of the circular base of a cylinder using the formula  $C = 2\pi r$  or  $C = \pi d$ , where  $r$  represents the radius of the circular base of the cylinder and  $d$  represents the diameter of the circular base of the cylinder

- Understand how to represent the area of the base of the cylinder,  $B$ , using the formula for the area of a circle,  $A = \pi r^2$ , where  $r$  represents the radius
- Understand how to determine the total surface area of a cylinder using the formula  $S = 2\pi rh + 2\pi r^2$ , where  $2\pi r$  represents the circumference (perimeter) of the circular base of the cylinder,  $h$  represents the height of the cylinder, and  $\pi r^2$  represents the area of the circular base of the cylinder
- Solve a problem involving the total surface area of a cylinder

Grade Level Note(s):

- Grade 7 determined the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles.
- Grade 7 solved problems involving the lateral and total surface area of a rectangular prisms, rectangular pyramids, triangular prisms, and triangular pyramids by determining the area of the shape's net.
- Grade 8 introduces determining lateral and total surface area using a formula.
- Various mathematical process standards will be applied to this student expectation as appropriate.

**Possible Learning Objectives (Goals)**

# An Exemplar Response

TEKS: 8.7B

26 A can in the shape of a cylinder has a diameter of 6 centimeters and a height of 10 centimeters. Which measurement is closest to the total surface area of the can in square centimeters?

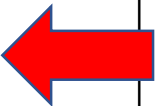
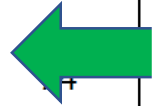
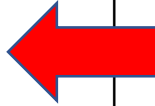
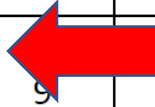
F  $603.19 \text{ cm}^2$

G  $245.04 \text{ cm}^2$

H  $376.99 \text{ cm}^2$

J  $188.50 \text{ cm}^2$

## Elements Considered in TEKS Resource System™ Item Analysis

Texas Education Agency Rationale		OPTIONS ANALYSIS			
		State			
A/F	The student likely used the diameter as the radius in the surface area formula, $S = 2\pi(6)(10) + 2\pi(6)^2$ . The student needs to focus on correctly identifying the parts of the formula and how they are related to the figure.		<b>Possible Misconception</b>		
B/G	Correct – To determine the total surface area (total area of the surfaces of a three-dimensional figure) of the can, the student should have used the formula for the total surface area of a cylinder, $S = 2\pi rh + 2\pi r^2$ , in which $r$ represents the radius (distance from the center to the circumference of a circle) and $h$ represents the height (vertical distance from top to bottom) of the can. To determine the value of $r$ , the student should have divided the given diameter (straight line going through the center of a circle connecting two points on the circumference), 6, by 2, resulting in $r = 3$ . Substituting the given values, the student should have evaluated $S = 2\pi(3)(10) + 2\pi(3)^2$ , which is approximately equal to 245.04. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.		<b>The Solution</b>		
C/H	The student likely used the diameter as the radius in the lateral surface area formula, $S = 2\pi(6)(10)$ . The student needs to focus on understanding and properly applying the formula for determining the total surface area of a figure and correctly identifying the parts of the formula and how they are related to the figure.		<b>Possible Misconceptions</b>		
D/J	The student likely used the lateral surface area formula, $S = 2\pi rh$ . The student needs to focus on understanding and properly applying the formula for determining the total surface area of a figure and correctly identifying the parts of the formula and how they are related to the figure.				

use formula:  $S = 2\pi rh + 2\pi r^2$

### An Exemplar Response

- 26 A can in the shape of a cylinder has a diameter of 6 centimeters and a height of 10 centimeters. Which measurement is closest to the total surface area of the can in square centimeters?

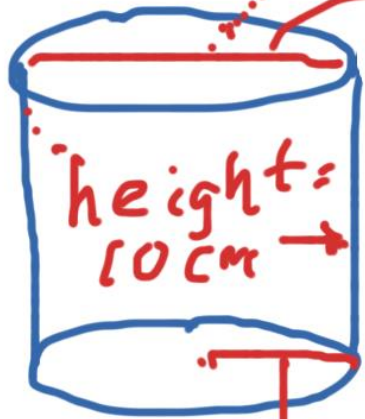
strategy: Draw a picture

F 603.19 cm<sup>2</sup>

G 245.04 cm<sup>2</sup>

H 376.99 cm<sup>2</sup>

J 188.50 cm<sup>2</sup>



radius = 3 cm

Diameter = 6 cm

$$S = 2 \cdot 3.14 \cdot 3 \cdot 10 + 2 \cdot 3.14 \cdot (3)^2$$

$$S = 188.4 + 56.52$$

$$S = 244.92 \approx 245$$

use formula:  $S = 2\pi rh + 2\pi r^2$

- 26 A can in the shape of a cylinder has a diameter of 6 centimeters and a height of 10 centimeters. Which measurement is closest to the total surface area of the can in square centimeters?

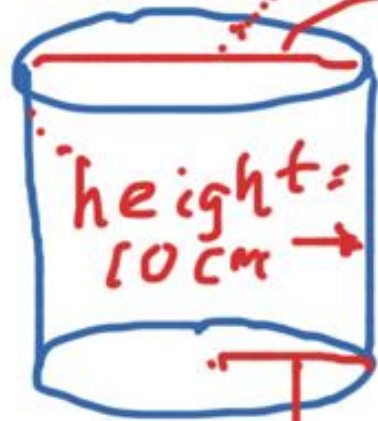
strategy: Draw a picture

F 603.19 cm<sup>2</sup>

G 245.04 cm<sup>2</sup>

H 376.99 cm<sup>2</sup>

J 188.50 cm<sup>2</sup>



radius = 3 cm

Diameter = 6 cm

$$S = 2 \cdot 3.14 \cdot 3 \cdot 10 + 2 \cdot 3.14 \cdot (3)^2$$

$$S = 188.4 + 56.52$$

$$S = 244.92 \approx 245$$

TEKS Resource System™ Notes

- Vocabulary – total surface area; cylinder; radius; diameter; height; circumference (perimeter); area of the base; measurement; dimensions; centimeters (cm); square centimeters (cm<sup>2</sup>);
- Understand how to determine the circumference (perimeter) of the circular base of a cylinder using the formula  $C = 2\pi r$  or  $C = \pi d$ , where  $r$  represents the radius of the circular base of the cylinder and  $d$  represents the diameter of the circular base of the cylinder

Possible mini topics and/or learning targets

- Understand how to represent the area of the base of the cylinder,  $B$ , using the formula for the area of a circle,  $A = \pi r^2$ , where  $r$  represents the radius
  - Understand how to determine the total surface area of a cylinder using the formula  $S = 2\pi rh + 2\pi r^2$ , where  $2\pi r$  represents the circumference (perimeter) of the circular base of the cylinder,  $h$  represents the height of the cylinder, and  $\pi r^2$  represents the area of the circular base of the cylinder
  - Solve a problem involving the total surface area of a cylinder
- Grade Level Note(s):
- Grade 7 determined the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles.
  - Grade 7 solved problems involving the lateral and total surface area of a rectangular prisms, rectangular pyramids, triangular prisms, and triangular pyramids by determining the area of the shape's net.
  - Grade 8 introduces determining lateral and total surface area using a formula.
  - Various mathematical process standards will be applied to this student expectation as appropriate.



# Checkpoint: Review of our learning

# Breakout Session (8 Mins.)

2020–2021 School Year Grade 8 Units Reflected on Year at a Glance (YAG)													
Grade 7 Last 9 Weeks Standards 2019-2020	Grade 8 Aligned Standards 2020-2021	Unit 01	Unit 02	Unit 03	Unit 04	Unit 05	Unit 06	Unit 07	Unit 08	Unit 09	Unit 10	Unit 11	Unit 12
There are no additional COVID-19 gap considerations from the previous grade level for this unit.		X											
District notes:													
There are no additional COVID-19 gap considerations from the previous grade level for this unit.			X										
District notes:													
7.10A Write one-variable, two-step equations and inequalities to represent constraints or conditions within problems. <i>Supporting Standard</i>	8.8A Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants. <i>Supporting Standard</i>			X G7U11 7.10A									
Considerations: Although students may have been taught 7.10A, they may not have had the opportunity to solidify the foundational understandings to prepare them for 8.8A. Grade 8 teachers should be prepared to: • Pre-assess students' understanding of writing one-variable, two-step equations and inequalities with the variable on one side of the equation or inequality prior to writing one-variable, two-step equations and inequalities with variables on both sides of the equation or inequality.													
District notes:													
7.10C Write a corresponding real-world problem given a one-variable, two-step equation or inequality. <i>Supporting Standard</i>	8.8B Write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants. <i>Supporting Standard</i>			X G7U11 7.10C									
Considerations: Although students may have been taught 7.10C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 8.8B. Grade 8 teachers should be prepared to: • Pre-assess students' understanding of writing a corresponding real-world problem given a one-variable, two-step equation or inequality with the variable on one side of the equation or inequality prior to writing a corresponding real-world problem given a one-variable, two-step equation or inequality with variables on both sides of the equation or inequality.													
District notes:													

Targeted Student Support for Maximizing Results										
8th STAAR Math Student Profile										
Student Name: _____ Period: _____										
Cate.	TEKS	R or S	Student Expectation	Basic	Basic	Interm	Interm	Interm	Adv.	Adv.
1	8.2A	S	Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers							
1	8.2B	S	Approximate the value of an irrational number, including $\pi$ and square roots of numbers less than 225, and locate that rational number approximation on a number line							
1	8.2C	S	Convert between standard decimal notation and scientific notation							
1	8.2D	R	Order a set of real numbers arising from mathematical and real-world contexts							
2	8.4A	S	Use similar right triangles to develop an understanding that slope, $m$ , given as the rate comparing the change in $y$ -values to the change in $x$ -values, $(y_2 - y_1) / (x_2 - x_1)$ , is the same for any two points $(x_1, y_1)$ and $(x_2, y_2)$ on the same line							
2	8.4B	R	Graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship							
2	8.4C	R	Use data from a table or graph to determine the rate of change or slope and $y$ -intercept in mathematical and real-world problems							
2	8.5A	S	Represent linear proportional situations with tables, graphs, and equations in the form of $y = kx$							
2	8.5B	S	Represent linear non-proportional situations with tables, graphs, and equations in the form of $y = mx + b$ , where $b \neq 0$							
2	8.5E	S	Solve problems involving direct variation							

Elements Considered in TEKS Resource System™ Item Analysis				
Texas Education Agency Rationale				OPTIONS ANALYSIS
				State
A/F	The student likely used the diameter as the radius in the surface area formula, $S = 2\pi(6)(10) + 2\pi(6)^2$ . The student needs to focus on correctly identifying the parts of the formula and how they are related to the figure.			9
B/G	Correct – To determine the total surface area (total area of the surfaces of a three-dimensional figure) of the can, the student should have used the formula for the total surface area of a cylinder, $S = 2\pi rh + 2\pi r^2$ , in which $r$ represents the radius (distance from the center to the circumference of a circle) and $h$ represents the height (vertical distance from top to bottom) of the can. To determine the value of $r$ , the student should have divided the given diameter (straight line going through the center of a circle connecting two points on the circumference), 6, by 2, resulting in $r = 3$ . Substituting the given values, the student should have evaluated $S = 2\pi(3)(10) + 2\pi(3)^2$ , which is approximately equal to 245.04. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.			74*
C/H	The student likely used the diameter as the radius in the lateral surface area formula, $S = 2\pi(6)(10)$ . The student needs to focus on understanding and properly applying the formula for determining the total surface area of a figure and correctly identifying the parts of the formula and how they are related to the figure.			7
D/I	The student likely used the lateral surface area formula, $S = 2\pi rh$ . The student needs to focus on understanding and properly applying the formula for determining the total surface area of a figure and correctly identifying the parts of the formula and how they are related to the figure.			9

- In your group, discuss how one or all of these documents can help you improve teaching and learning.
- Be prepared to share some of your responses



**Share  
Out!**



## STAAR Grade 8 Mathematics Assessment Eligible TEKS

1. Numerical Representations and Relationships (4 questions)		2. Computations and Algebraic Relationships (16 questions)		
S	8.2A	Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers.	S 8.4A	Use similar right triangles to develop an understanding that slope, $m$ , given as the rate comparing the change in $y$ -values to the change in $x$ -values, $(y_2 - y_1)/(x_2 - x_1)$ , is the same for any two points $(x_1, y_1)$ and $(x_2, y_2)$ on the same line.
S	8.2B	Approximate the value of an irrational number, including $\pi$ and square roots of numbers less than 225, and locate that rational number approximation on a number line.	R 8.4B	Graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship.
S	8.2C	Convert between standard decimal notation and scientific notation.	R 8.4C	Use data from a table or graph to determine the rate of change or slope and $y$ -intercept in mathematical and real-world problems.
R	8.2D	Order a set of real numbers arising from mathematical and real-world contexts.	S 8.5A	Represent linear proportional situations with tables, graphs, and equations in the form $y = kx$ .
			S 8.5B	Represent linear non-proportional situations with tables, graphs, and equations in the form $y = mx + b$ , where $b \neq 0$ .
			S 8.5E	Solve problems involving direct variation.
			S 8.5F	Distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form $y = kx$ or $y = mx + b$ , where $b \neq 0$ .
			R 8.5G	Identify functions using sets of ordered pairs, tables, mappings, and graphs.
			S 8.5H	Identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems.
			R 8.5I	Write an equation in the form $y = mx + b$ to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations.
			S 8.8A	Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants.
			S 8.8B	Write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants.
			R 8.8C	Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants.
			S 8.9A	Identify and verify the values of $x$ and $y$ that simultaneously satisfy two linear equations in the form $y = mx + b$ from the intersections of the graphed equations.

## STAAR Items in A Box

STAAR 2018  
8.5C-3 (R)

Thirteen X

A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

If  $(x, y)$  represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

A.  $(20x, 20y)$   
 B.  $(0.4x, 0.4y)$   
 C.  $(x + 20, y + 20)$   
 D.  $(x + 0.4, y + 0.4)$

1

STAAR 2018  
8.4B-2 (S)

Twelve Z

An isosceles triangle with a base of 10 units is graphed on a coordinate grid. The height of the triangle is 12 units.

Which expression best describes the area of the triangle?

A. The height of the side increases 20 times the original.  
 B. The height of the side increases 12 times the original.  
 C. The height of the side increases 6 times the original.  
 D. The height of the side increases 10 times the original.

2

STAAR 2018  
8.5C-1 (R)

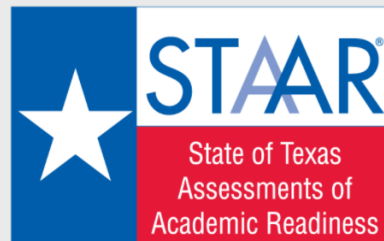
Thirteen X

A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

If  $(x, y)$  represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

A.  $(20x, 20y)$   
 B.  $(0.4x, 0.4y)$   
 C.  $(x + 20, y + 20)$   
 D.  $(x + 0.4, y + 0.4)$

3



## Select a test to take

Summative Assessment

Interim Assessment

Practice

Tutorials



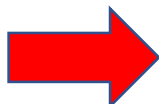
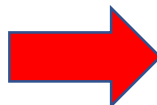
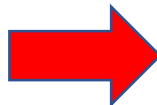
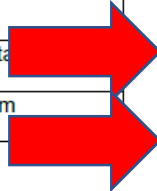
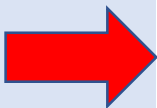
## STAAR Grade 8 Mathematics Assessment Eligible TEKS

### 1. Numerical Representations and Relationships (4 questions)

S	8.2A	Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers.
S	8.2B	Approximate the value of an irrational number, including $\pi$ and square roots of numbers less than 225, and locate that rational number approximation on a number line.
S	8.2C	Convert between standard decimal notation and scientific notation.
R	8.2D	Order a set of real numbers arising from mathematical and real-world contexts.

### 2. Computations and Algebraic Relationships (16 questions)

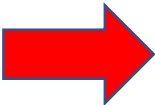
S	8.4A	Use similar right triangles to develop an understanding that slope, $m$ , given as the rate comparing the change in $y$ -values to the change in $x$ -values, $(y_2 - y_1) / (x_2 - x_1)$ , is the same for any two points $(x_1, y_1)$ and $(x_2, y_2)$ on the same line.
R	8.4B	Graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship.
R	8.4C	Use data from a table or graph to determine the rate of change or slope and $y$ -intercept in mathematical and real-world problems.
S	8.5A	Represent linear proportional situations with tables, graphs, and equations in the form of $y = kx$ .
S	8.5B	Represent linear non-proportional situations with tables, graphs, and equations in the form of $y = mx + b$ , where $b \neq 0$ .
S	8.5E	Solve problems involving direct variation.
S	8.5F	Distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form $y = kx$ or $y = mx + b$ , where $b \neq 0$ .
R	8.5G	Identify functions using sets of ordered pairs, tables, mappings, and graphs.
S	8.5H	Identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems.
R	8.5I	Write an equation in the form $y = mx + b$ to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations.
S	8.8A	Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants.
S	8.8B	Write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants.
R	8.8C	Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants.
S	8.9A	Identify and verify the values of $x$ and $y$ that simultaneously satisfy two linear equations in the form $y = mx + b$ from the intersections of the graphed equations.





## STAAR Grade 8 Mathematics Assessment Eligible TEKS

3. Geometry and Measurement (15 questions)		
S	8.3A	Generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation.
S	8.3B	Compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane.
R	8.3C	Use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation.
S	8.6A	Describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height.
S	8.6C	Use models and diagrams to explain the Pythagorean theorem.
R	8.7A	Solve problems involving the volume of cylinders, cones, and spheres.
R	8.7B	Use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders.
R	8.7C	Use the Pythagorean Theorem and its converse to solve problems.
S	8.7D	Determine the distance between two points on a coordinate plane using the Pythagorean Theorem.
S	8.8D	Use informal arguments to establish facts about the angle sum and exterior angle of triangles, the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.
S	8.10A	Generalize the properties of orientation, congruence of rotations, reflections, translations, and dilations of two-dimensional shapes on a coordinate plane.
S	8.10B	Differentiate between transformations that preserve congruence and those that do not.
R	8.10C	Explain the effect of translations, reflections over the $x$ - or $y$ -axis, and rotations limited to $90^\circ$ , $180^\circ$ , $270^\circ$ , and $360^\circ$ as applied to two-dimensional shapes on a coordinate plane using an algebraic representation.
S	8.10D	Model the effect on linear and area measurements of dilated two-dimensional shapes.




4. Data Analysis and Personal Financial Literacy (7 questions)		
S	8.5C	Contrast bivariate sets of data that suggest a linear relationship with bivariate sets of data that do not suggest a linear relationship from a graphical representation.
R	8.5D	Use a trend line that approximates the linear relationship between bivariate sets of data to make predictions.
S	8.11A	Construct a scatterplot and describe the observed data to address questions of association such as linear, non-linear, and no association between bivariate data.
S	8.11B	Determine the mean absolute deviation and use this quantity as a measure of the average distance data are from the mean using a data set of no more than 10 data points.
S	8.12A	Solve real-world problems comparing how interest rate and loan length affect the cost of credit.
S	8.12C	Explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time.
R	8.12D	Calculate and compare simple interest and compound interest earnings.
S	8.12G	Estimate the cost of a two-year and four-year college education, including family contribution, and devise a periodic savings plan for accumulating the money needed to contribute to the total cost of attendance for at least the first year of college.

Not Eligible for STAAR		
8.6B	Model the relationship between the volume of a cylinder and a cone having both congruent bases and heights and connect that relationship to the formulas.	
8.11C	Simulate generating random samples of the same size from a population with known characteristics to develop the notion of a random sample being representative of the population from which it was selected.	
8.12B	Calculate the total cost of repaying a loan, including credit cards and easy access loans, under various rates of interest and over different periods using an online calculator.	
8.12E	Identify and explain the advantages and disadvantages of different payment methods.	
8.12F	Analyze situations to determine if they represent financially responsible decisions and identify the benefits of financial responsibility and the costs of financial irresponsibility.	

Blueprint Summary			
	Total	STAAR	
Readiness	13	60%-65%	25 – 27
Supporting	27	35%-40%	15 – 17
Total Number of Questions on Test: 38 Multiple Choice; 4 Griddable; 42 Total			

# STAAR Items in A Box

 **2018**


**8.3C – 3 (R)** **thirteen X**

**29** A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

If  $(x, y)$  represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

**A**  $(20x, 20y)$   
**B**  $(0.4x, 0.4y)$   
**C**  $(x + 20, y + 20)$   
**D**  $(x + 0.4, y + 0.4)$

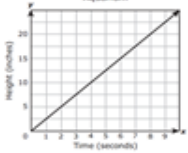
**1**

 **2016**

**8.4B – 2 (R)** **fourteen Z**

**3** An aquarium is being filled with water. The graph shows the height of the water over time as the aquarium is being filled.


Aquarium



Which statement best describes the rate of change for this situation?

**A** The height of the water increases 20 inches per second.  
**B** The height of the water increases 1 inch per second.  
**C** The height of the water increases 5 inches per second.  
**D** The height of the water increases 2.5 inches per second.

**2**

 **2018**

**8.3C – 3 (R)** **thirteen X**

**29** A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

If  $(x, y)$  represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

**A**  $(20x, 20y)$   
**B**  $(0.4x, 0.4y)$   
**C**  $(x + 20, y + 20)$   
**D**  $(x + 0.4, y + 0.4)$

**3**

8.2D – 1 (R)

17 The table shows the completion times of four runners in a race.

Race Times

Runner	Time (seconds)
Joe	$12\frac{1}{2}$
Ellen	12.09
Steve	$12\frac{2}{5}$
Patty	12.8

Which list shows the runners in order by their completion times from fastest to slowest?

- A Patty, Joe, Steve, Ellen
- B Ellen, Joe, Steve, Patty
- C Ellen, Steve, Joe, Patty
- D Patty, Steve, Joe, Ellen

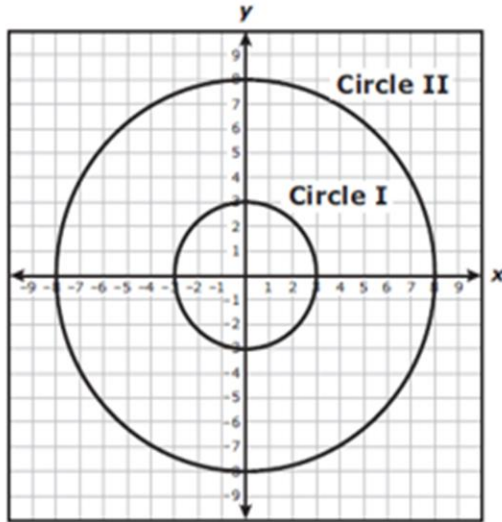
sixteen Y



**Answer to every problem is hidden in plain sight. Simply transpose the letters  
 ABCD = WXYZ = FGHI**

**8.3C – 3 (R)**

26 Circle I was dilated with the origin as the center of dilation to create Circle II.



Which rule best represents the dilation applied to Circle I to create Circle II?

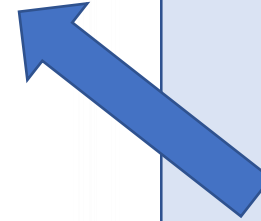
F  $(x, y) \rightarrow (\frac{3}{8}x, \frac{3}{8}y)$

G  $(x, y) \rightarrow (\frac{8}{3}x, \frac{8}{3}y)$

H  $(x, y) \rightarrow (x + 5, y + 5)$

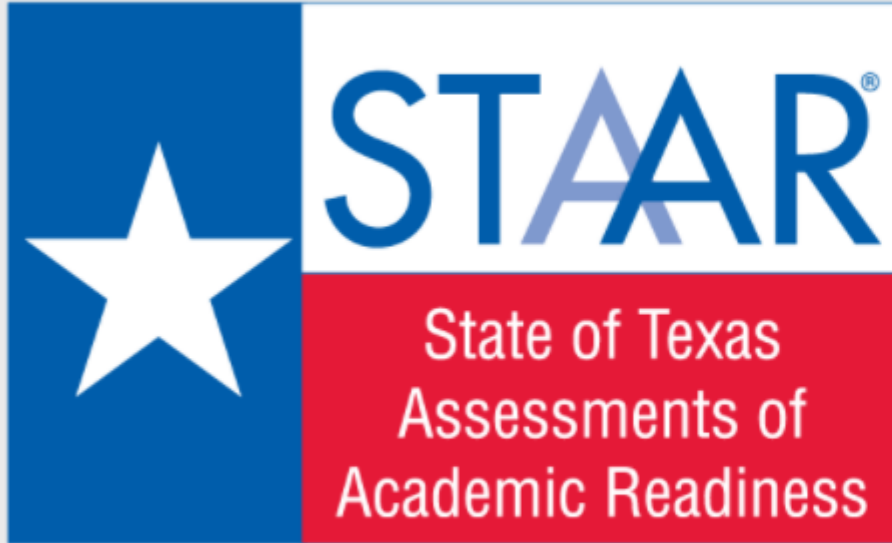
J  $(x, y) \rightarrow (x - 5, y - 5)$

eight X



**Answer to every problem is hidden in plain sight. Simply transpose the letters  
ABCD = WXYZ = FGHI**





## Select a test to take

Summative Assessment

Interim Assessment

Practice

Tutorials

<https://tx-tss.caltesting.org/inbrowser/>

# New Texas Formative Assessment Resource (TFAR) and Updates to STAAR Interim Assessments

 New-Texas-Formative-Assessment-Resource-TFAR-and-Updates-to-STAAR-Interim-Assessments.pdf

120.96 KB

<b>Date:</b>	August 20, 2020
<b>Subject:</b>	New Texas Formative Assessment Resource (TFAR) and Updates to STAAR Interim Assessments
<b>Category:</b>	Student Assessment
<b>Next Steps:</b>	Please share with district and campus administrators

The purpose of this To the Administrator Addressed (TAA) is to inform superintendents and district and campus administrators about the new Texas Formative Assessment Resource (TFAR) and updates to the STAAR Interim Assessments due to COVID-19.



## Texas Formative Assessment Resource (TFAR)

TEA is launching the TFAR, which is a new, free, optional, online tool consisting of an item bank aligned to the Texas Essential Knowledge and Skills (TEKS). This optional tool is designed to support teachers in gaining real-time, formative feedback on student learning as instruction occurs. Teachers will be able to create and deliver quizzes and analyze results to help inform instructional choices such as making immediate lesson plan adjustments or providing specific interventions for students at the level of individual standards. TFAR can be used as part of on-campus or virtual instruction.

TFAR is meant to supplement and support existing district resources and formative assessment practices. Quizzes built using this tool should be combined with a broader set of classroom formative practices that are part of a coherent instructional framework.

TFAR will be available starting August 31, 2020. Initially, the item bank within TFAR will contain STAAR released items, but, over time, additional items will be added. Teachers will be able to create their own TEKS-aligned items to administer within the platform.

There will be a webinar on August 24, 2020, with additional information. To read the frequently asked questions or register to join the webinar, please visit the [Texas Formative Assessment Resource](#) webpage.

## STAAR Interim Assessments

STAAR Interim Assessments, an optional online tool to help educators monitor progress and predict student performance, will continue for the 2020–2021 school year for all STAAR tested grades and subjects. In response to COVID-19, TEA has provided additional support and guidance for districts who would like students to complete an interim assessment at home.

To see recordings of previous webinars, register for upcoming webinars, and view the frequently asked questions, please visit the [STAAR Interim Assessments](#) web page.

Texas Education Agency  
Student Assessment Division  
[Help Desk](#)

# Texas Formative Assessment Resource



The Texas Education Agency (TEA) has created an **optional online formative assessment resource** that aligns to the Texas Essential Knowledge and Skills (TEKS). This tool will be available at no cost to districts and charter schools, and is not tied to accountability. The Texas Formative Assessment Resource (TFAR) is an assessment tool designed to inform teaching decisions and improve instructional supports.

## Key Dates

TFAR Registration Open	August 27, 2020
TFAR Launches	August 31, 2020

## Resources

- [Texas Formative Assessment Resource FAQs](#) (PDF updated 09/14/20)
- [TFAR General Webinar](#) (Video posted 08/27/20)
- [TFAR General Webinar](#) (PDF posted 09/01/20)

## Registration Materials for Districts

The materials below are for testing coordinators wishing to register for TFAR.

Good news! Workshops with hands on support are available to testing coordinators.

Please see the [Student Assessment Correspondence with Districts](#) webpage to view the correspondence sent out for demonstrations.

- [TFAR Registration Webform](#)
- [TFAR Registration Presentation](#) (Video posted 08/26/20)
- [TFAR Registration Presentation](#) (PDF posted 08/26/20)
- [TFAR Registration Data File Format](#) (PDF updated 09/04/20)
- [TFAR Registration File Header](#) (Excel posted 08/27/20)
- [TFAR Data Extraction and Submission for SIS Vendors](#) (PDF posted 08/31/20)
- [TFAR Roles and Permissions Matrix](#) (PDF posted 08/28/20)

## Testing

[STAAR Report Card](#)

[Student Assessment Overview](#)

[Accommodation Resources](#)

[Assessments for English Learners](#)

[Assessments for Students with Disabilities](#)

[STAAR Spanish Resources](#)

[STAAR Alternate 2](#)

[STAAR Interim Assessments](#)

[State of Texas Assessments of Academic Readiness \(STAAR\)](#)

[Results](#)

[TAKS](#)

[TELPAS Alternate](#)

[Texas English Language Proficiency Assessment System \(TELPAS\)](#)

[Texas Formative Assessment Resource \(TFAR\)](#)

## Contact Information

Have questions? Submit them to the Student Assessment HelpDesk!

Campuses or districts that want to share resources created in-house related to TFAR can send those to:  
[studentassessment@tea.texas.gov](mailto:studentassessment@tea.texas.gov)

Resources shared will be available on this page for other districts to access and use.



# Key Components of Data Driven Instruction

Teachers need the following:

- Deep Content Knowledge
- Varied Assessment Practices
- Strong Classroom Management
- Effective Instructional Delivery
- Engaging Lessons

Commit to improve on 2 of these for next year

What other resources or support do you need from the ESC or your district?



Post in the CHAT Activity



Thank You

**Contact Information**

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