TEKSING TOWARD STAAR

MATHEMATICS ®

GRADE 8

TEKS/STAAR Spiraled Practice and Profile Booklets

Correlated by Category/TEKS

Overview

OVERVIEW

This document was created with all students in mind and provides teachers with sets of 3 spiraled questions to assess student mastery of TEKS assessed on STAAR as well as Class and Student Profiles designed for recording and analysis of performance data. Each question in this document is correlated to a specific STAAR Category and TEKS.

This document provides both multiple choice and answer grid formats. However, the questions can easily be utilized without the multiple choice answers or answer grid. The questions are spiraled through all TEKS and pieces of TEKS that are eligible for assessment on STAAR. Twenty spirals are provided for each six weeks for a total of 120 Spiraled Practice sets.

The spiraling of the questions takes into consideration the following information from the STAAR Grade 8 Mathematics Blueprint released from the TEA in January 2014:

- 60% - 65% of the questions will assess Readiness Standards – 33-36 of 56 total questions
- 35% - 40% of the questions will assess Supporting Standards – 20-23 of 56 total questions
- 52 questions will be multiple choice format and 4 questions will be griddable format

The Profiles were designed to enable teachers and students to keep a record of mastery of all TEKS, not just the ones assessed on STAAR. Every question on each Spiraled Practice is correlated on the Profiles. Teachers keep a Class Profile to guide plans for instruction for each class they teach. Students keep a Student Profile so they will know their own individual strengths and weaknesses. Teachers view individual Student Profiles to guide plans for small group instruction and individualized tutorials.

There is no answer key provided for this document, as the authors' philosophy is that each teacher should create a personalized Solutions Manual so the teacher becomes more familiar with the TEKS and assessment of the TEKS, as well as formulates various solution strategies for each question. Teachers are encouraged to communicate with the authors regarding discussion of any question in this document.

AUTHORS' VISION FOR IMPLEMENTATION – SPIRALED PRACTICE

- Begin the class period with a Spiraled Practice. Students work in Partner Pairs until Six Weeks 4 when they begin working individually without assistance.
- Students should first identify the **MAIN IDEA** and **SUPPORTING DETAILS** for each problem, then work each problem – they must show all work they do to help them choose their answer – the objective would be that anyone who looks at their paper should be able to understand how they chose their answer.
- After students begin working, quietly assign three different Partner Pairs as **SHARE PAIRS** for the 3 problems. If you have an opaque projection device, the share pairs will share their work from their paper. If you do not, then prior to class label 3 different transparencies as #1, #2, and #3 (small numbers in the top left corner of each transparency) and distribute the blank transparencies and overhead pens to the **SHARE PAIRS** so they will be able to show their work utilizing an overhead projector.
- The **SHARE PAIRS** and are assigned to work on their assigned problem **FIRST**, then complete the other questions if they have time – they must **SHOW** all work – the teacher should monitor the share pairs closely and answer any questions they have about the problem.
- **ALL** students should work in pairs to complete a Spiraled Practice in 6 minutes – each student recording on their individual page(s). Call **TIME** after 6 minutes.
- Immediately **SHARE PAIR 1** places their paper or paper or transparency on the projection device and shares how they solved the problem. First, they say "The main idea of the problem is…"; then they say "The supporting details in the problem are…". Then they share the process they used to answer the problem. After sharing, they ask the class: "Did anyone get a different answer?" and "Did anyone solve the problem differently?" If someone did, they share and discussion follows. If the **SHARE PAIR** could not complete the problem (however, ever share pair/student should be expected to find the main idea and supporting details in each problem, even if they cannot answer the problem), they ask the class if anyone could complete the problem – if so, a pair that completed the problem is asked to come up and share their work with discussion following.
- If no student could answer the problem correctly, the teacher makes a decision whether to continue discussion of the problem at this point, or to delay discussion until a more appropriate time (if the decision is made to delay discussion, tell the students that they will be working on this problem in a major lesson later and discussion will continue then).

AUTHORS' VISION FOR IMPLEMENTATION – PROFILES

CLASS PROFILE:

- Teachers record in a Class Profile for each class. The questions on each Spiraled Practice are correlated on the Class Profile.
- Suggestion for recording class data:
  Record **+** if class data demonstrates mastery
  Record **–** if class data demonstrates improvement needed
- Record **+** based on the following:
  August/September – Record **+** if 50% or higher of class demonstrates mastery
  October – Record **+** if 60% or higher of class demonstrates mastery
  November – Record **+** if 70% or higher of class demonstrates mastery
  December – Record **+** if 80% or higher of class demonstrates mastery
  January-May – Record **+** if 90% or higher of class demonstrates mastery
- Periodically highlight all **+** in **green** and highlight all **–** in **hot pink**.
- Begin glancing over each Class Profile by TEKS to identify areas of strength and weakness. Use this data to make instructional decisions regarding focus for instructional time by class.

STUDENT PROFILE:

- Each student records in an individual Student Profile – teachers do not record in Student Profiles. The questions on each Spiraled Practice are correlated on the Student Profile.
- Record **+/–** based on the following:
  Record **+** if answer is correct
  Record **–** if answer is incorrect
- Periodically highlight all **+** in **green** and highlight all **–** in **hot pink**.
- Student – Periodically glance over the Student Profile to identify areas of strength and weakness
- Teacher – Periodically glance over each Student Profile by TEKS to identify areas of individual strength and weakness. Use this data to make instructional decisions regarding focus for tutorial time.

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92	Category 2/8.4B	Category 3/8.3C	Category 4/8.12D
93	Category 1/8.2D	Category 2/8.5G	Category 3/8.6C
94	Category 4/8.11B	Category 3/8.7B	Category 2/8.5A
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99	Category 2/8.8C	Category 2/8.5I	Category 3/8.7D
100	Category 3/8.10C	Category 2/8.5B	Category 3/8.10B
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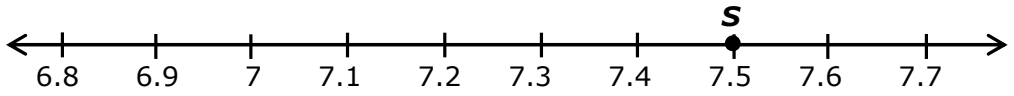
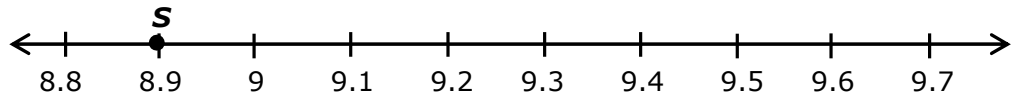
TEKS/STAAR SPIRALED PRACTICE 1
Grade 8

1. If the area of a square is 88 units^2, on which number line does *S* represents the side length of the square?

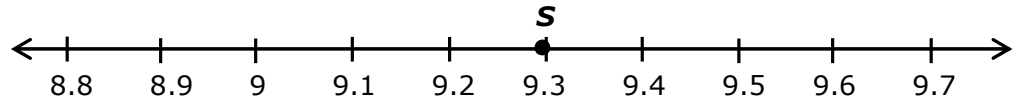
A



B



C



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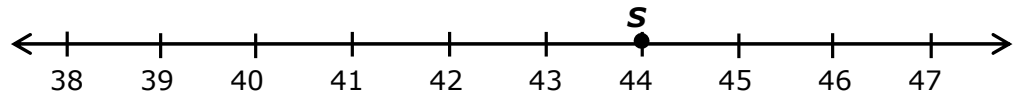

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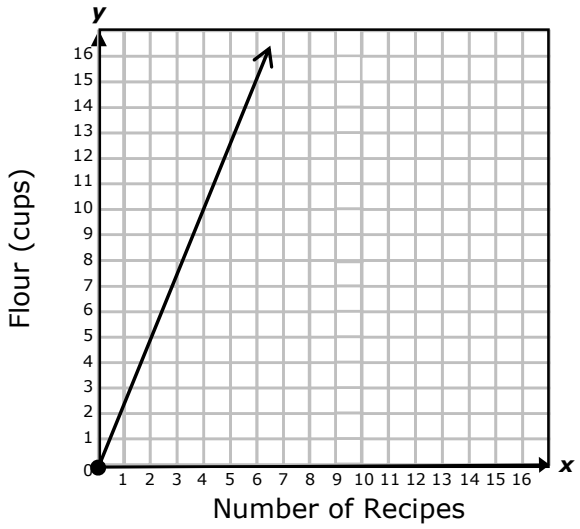
2. The graph below shows the relationship between the number of brownie recipes and the number of cups of flour required.



Based on the information in the graph, what is the unit rate in cups flour per recipe?

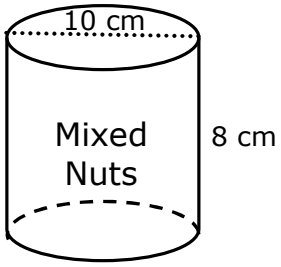
F 2 cups per recipe

G 3 cups per recipe

H 2.5 cups per recipe

J 1.5 cups per recipe

3. A can of mixed nuts is shown below.



What is the volume of the mixed nuts can?

A 800π cubic centimeters

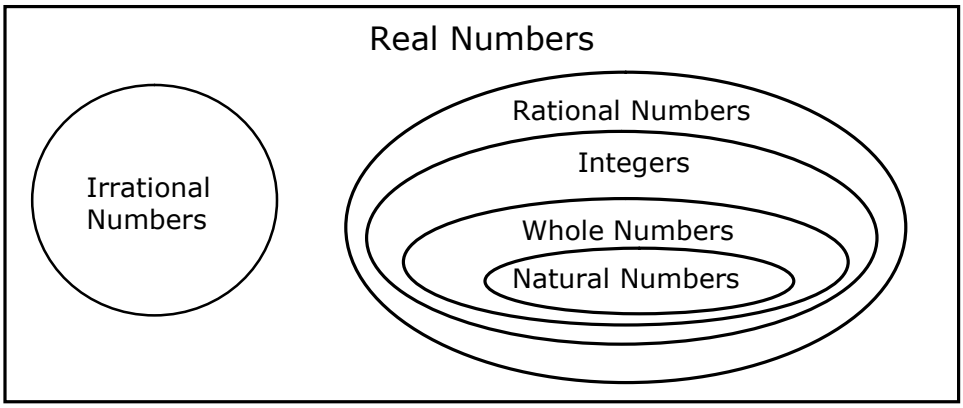
B 200π cubic centimeters

C 80π cubic centimeters

D 40π cubic centimeters

TEKS/STAAR SPIRALED PRACTICE 21
Grade 8

1. This Venn diagram shows the relationship of the subsets of the real number system.



Which of the following is a rational number but NOT an integer?

A 4

B -8

C $\frac{13}{2}$

D $\sqrt{6}$

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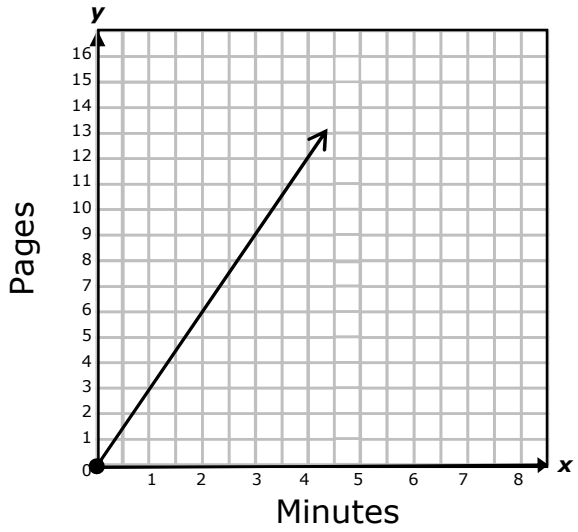
2. The graph below shows the relationship between the number of minutes read and the number of pages read.



Based on the information in the graph, what is the unit rate in pages per minute?

F 3 pages per minute

G 4 pages per minute

H 2 pages per minute

J 5 pages per minute

3. Triangle *ABC* has vertices *A*(3, 6), *B*(−4, 2), and *C*(2, 0). The triangle is to be rotated 90° clockwise. What will be the coordinates of *A′* and *B′* ?

   A *A′*(6, −3) and *B′*(2, 4)

   B *A′*(6, 3) and *B′*(2, −4)

   C *A′*(−3, 6) and *B′*(4, 2)

   D Not Here

TEKS/STAAR SPIRALED PRACTICE 41
Grade 8

1. Which equation represents a non-proportional linear relationship between the variables?

   A $b = 12g$

   B $y = 4 + x$

   C $y = 4g$

   D $y = 3x^2$

---

2. Mr. Dillon graphed a scatter plot of the number of hours he drove (h) and the number of miles he traveled (d). He then found a trend line of his data to be $d = 40.5h + 8$. What is the predicted distance Mr. Dillon will travel if he drives 6 hours?

   F 132 miles

   G 275 miles

   H 251 miles

   J 242 miles

---

3. Triangle ABC has vertices $A(2, 8)$, $B(-1, 5)$, and $C(4, -4)$. Triangle ABC is dilated with the origin as the center of dilation. The vertices of the dilation are $A'(3, 12)$, $B'(-1.5, 7.5)$, and $C'(6, -6)$. Which algebraic representation best describes this dilation?

   A $(x, y) \rightarrow (0.5x, 0.5y)$

   B $(x, y) \rightarrow (x + 4, y + 7)$

   C $(x, y) \rightarrow (2x, 2y)$

   D $(x, y) \rightarrow (1.5x, 1.5y)$

TEKS/STAAR SPIRALED PRACTICE 61
Grade 8

1. The length of the shorter base of a trapezoid, *s*, is 3 less than 2 times the longer base of the trapezoid, *l*. Which equation can be used to determine the length of the shorter base of the trapezoid?

   A $s = 3 - 2l$

   B $s = 2l - 3$

   C $s = \frac{l + 3}{2}$

   D $s = 2l + 3$

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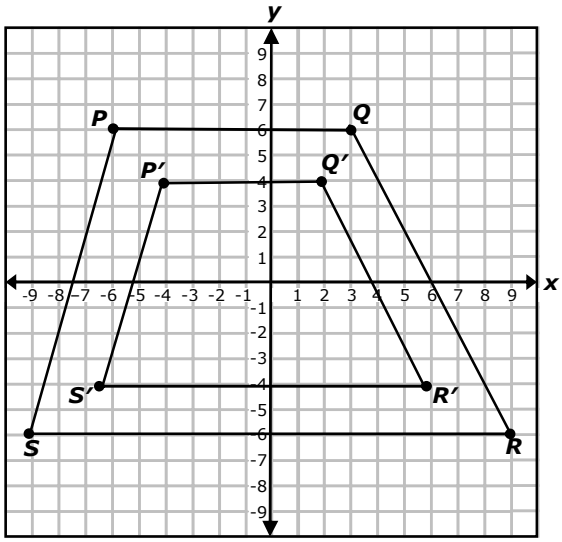
2. Trapezoid *PQRS* is dilated to form trapezoid *P′Q′R′S′* with the origin being the center of dilation.



   Which algebraic representation best describes this dilation?

   F $(x, y) \rightarrow \left(\frac{3}{4}x, \frac{3}{4}y\right)$

   G $(x, y) \rightarrow \left(\frac{2}{3}x, \frac{2}{3}y\right)$

   H $(x, y) \rightarrow \left(\frac{1}{2}x, \frac{1}{2}y\right)$

   J $(x, y) \rightarrow \left(\frac{3}{2}x, \frac{3}{2}y\right)$

---

3. If a set of data points has a trend line of $y = 4.5x + 2$, what is the predicted value of *y* when $x = 16$?

   A 94

   B 64

   C 74

   D 75

TEKS/STAAR SPIRALED PRACTICE 81
Grade 8

1. Which of the following does NOT represent a subset of rational numbers?

A $\left\{-3,\ 4,\ \frac{1}{2},\ 3.2\right\}$

B $\left\{-3\frac{1}{2},\ \pi,\ 2,\ 56\right\}$

C $\left\{\frac{-3}{4},\ \frac{4}{9},\ \frac{1}{3},\ 5\right\}$

D $\left\{0,\ 13,\ \frac{3}{2},\ \frac{3}{5}\right\}$

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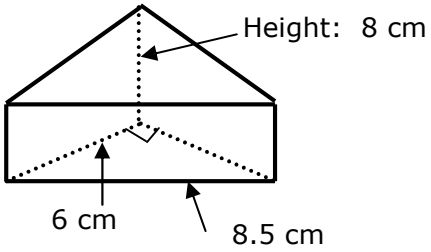
2. A triangular prism is shown below.



Which best represents the total surface area of the prism?

F 164 square centimeters

G 200 square centimeters

H 132 square centimeters

J 182 square centimeters

---

3. The table below describes points of a line.

x	1	0	−1	5
y	9	4	−1	29

What is the slope of the line?

A 3

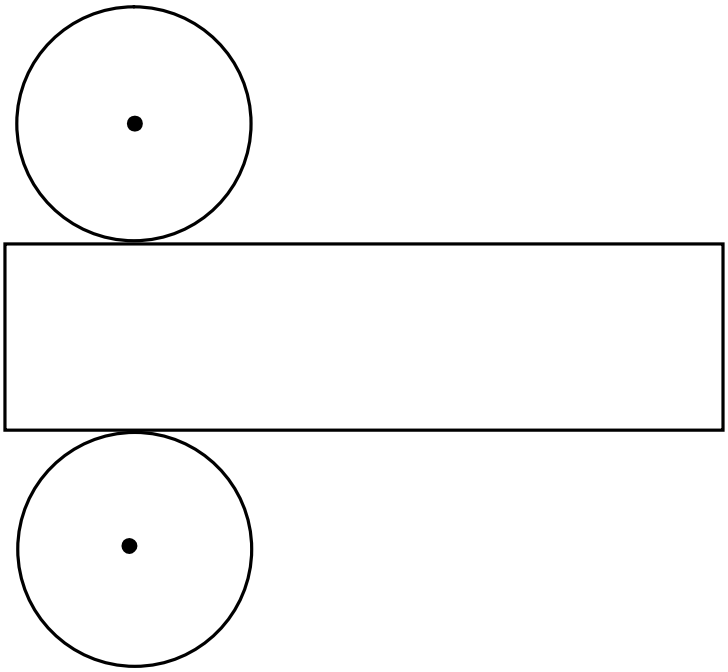
B 2

C 5

D $\frac{1}{5}$

TEKS/STAAR SPIRALED PRACTICE 101
Grade 8

1. The net for a cylinder is shown below. Use a ruler on the Reference Materials to measure the dimensions of the cylinder to the nearest one-half centimeter.



Which of the following best represents the total surface of the cylinder to the nearest square centimeter?

A 18 square centimeters

B 30 square centimeters

C 14 square centimeters

D 38 square centimeters

---

2. Which list contains exactly two irrational numbers and 3 whole numbers?

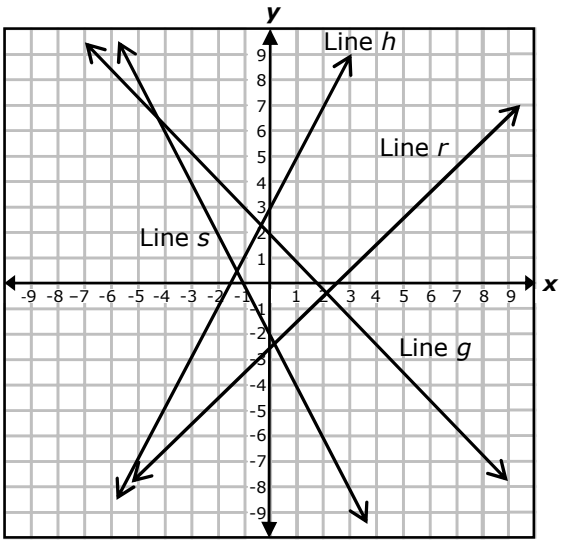
F $\{\sqrt{3},\ \pi, -3, 4, 10\}$

G $\{2\sqrt{5},\ \pi, 0.3, 5, 6\}$

H $\{7,\ \sqrt{3},\ \pi, 8, 22\}$

J $\{\sqrt{4},\ \pi, 8, 3, 12\}$

3. Which line graphed below has a negative slope and a negative *y*-intercept?



A Line *g*

B Line *h*

C Line *r*

D Line *s*

TEKSING TOWARD STAAR

MATHEMATICS ®

Grade 8

Class Profile for Spiraled Practice

Teacher _____

Class _____

GRADE 8 TEKSING TOWARD STAAR MATHEMATICS CLASS PROFILE

STAAR REPORTING CATEGORY 1: NUMERICAL REPRESENTATIONS AND RELATIONSHIPS												
Standard	**TEKS**	**Student Expectation**	**Class Performance**									
Supporting	8.2(A)	extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers	21	54	71	81	101					
Supporting	8.2(B)	approximate the value of an irrational number, including π and square roots of numbers less than 225, and locate that rational number approximation on a number line	1	45	78	82	120					
Supporting	8.2(C)	convert between standard decimal notation and scientific notation	13	31	65	91	110	112				
Readiness	8.2(D)	order a set of real numbers arising from mathematical and real-world contexts	2	6	11	18	22	26	33	38	42	51
			53	55	62	67	73	86	93	98	105	117

GRADE 8 TEKSING TOWARD STAAR MATHEMATICS CLASS PROFILE

STAAR REPORTING CATEGORY 2: COMPUTATIONS AND ALGEBRAIC RELATIONSHIPS													
Standard	**TEKS**	**Student Expectation**	**Class Performance**										
Supporting	8.4(A)	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	25	59	68	118							
Readiness	8.4(B)	graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship	1	8	19	21	28	33	48	56	64	66	
			76	85	92	97	103	108	111	116			
Readiness	8.4(C)	use data from a table or graph to determine the rate of change or slope and *y*-intercept in mathematical and real-world problems	9	12	17	22	29	34	43	58	62	67	
			73	81	89	95	101	104	109				
Supporting	8.5(A)	represent linear proportional situations with tables, graphs, and equation in the form of $y = kx$.	10	39	68	94	105						
Supporting	8.5(B)	represent linear non-proportional situation with tables, graphs, and equations in the form of $y = mx + b$, where $b \neq 0$	11	41	74	100	107						
Supporting	8.5(E)	solve problems using direct variation	2	24	44	70	90	114					
Supporting	8.5(F)	distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form of $y = kx$ or $y = mx + b$, where $b \neq 0$	14	39	43	88	120						
Readiness	8.5(G)	identify functions using sets of ordered pairs, tables, mappings, and graphs	3	8	17	23	28	40	45	48	63	57	
			64	69	72	83	93	97	102	113	115		
Supporting	8.5(H)	identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems	4	40	55	79	96	118					
Readiness	8.5(I)	write an equation in the form $y = mx + b$, to model a linear relationship between verbal, numerical, tabular, and graphical representations	5	13	20	24	31	35	46	51	54	57	
			61	65	71	82	91	99	103	110	118		
Supporting	8.8(A)	write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants	19	37	50	77	116						
Supporting	8.8(B)	write a 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	15	30	52	63	86	107					
Readiness	8.8(C)	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	6	16	20	26	32	37	44	50	60	72	
			75	77	84	88	89	112	119				
Supporting	8.9(A)	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	18	36	60	79	86						

GRADE 8 TEKSING TOWARD STAAR MATHEMATICS CLASS PROFILE

STAAR REPORTING CATEGORY 3: GEOMETRY AND MEASUREMENT													
Standard	**TEKS**	**Student Expectation**	**Class Performance**										
Supporting	8.3(A)	generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation	9	23	45	77	85						
Supporting	8.3(B)	compare and contrast the attributes of a shape and its dilations(s) on a coordinate plane	5	51	71	87	102						
Readiness	8.3(C)	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	2	14	20	22	39	41	47	55	61	65	
			70	83	90	92	103	109	112				
Supporting	8.6(A)	describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height	27	29	57	69	87	120					
Supporting	8.6(C)	use models and diagrams to explain the Pythagorean Theorem	7	52	75	93	119						
Readiness	8.7(A)	solve problems involving the volume of cylinders, cones, and spheres	1	11	15	24	33	36	42	47	63	67	
			84	91	96	106	111	116					
Readiness	8.7(B)	use previous knowledge of surface area to make connections to the formula for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms and cylinders	3	18	25	38	40	43	48	55	64	72	
			81	94	101	107							
Readiness	8.7(C)	use the Pythagorean Theorem and its converse to solve problems	4	16	19	25	28	37	44	53	62	78	
			88	97	104	110	114						
Supporting	8.7(D)	determine the distance between two points on a coordinate plane using the Pythagorean Theorem	8	34	50	80	99	117					
Supporting	8.8(D)	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	12	30	58	79	82						
Supporting	8.10(A)	generalize the properties of orientation and congruence of rotations, reflections, translations, and dilations of two-dimensional shapes on a coordinate plane	7	31	60	98	108						
Supporting	8.10(B)	differentiate between transformations that preserve congruence and those that do not	10	32	68	100	115						
Readiness	8.10(C)	explain the effects translations, reflections over the x- or y-axis, and rotations limited to $90°$, $180°$, $270°$, and $360°$ as applied to two-dimensional shapes on a coordinate plane using an algebraic representation	13	17	21	35	45	49	56	66	80	89	
			95	100	104	106							
Supporting	8.10(D)	model the effect on linear and area measurements of dilated two-dimensional shapes	5	27	59	66	86	118					

GRADE 8 TEKSING TOWARD STAAR MATHEMATICS CLASS PROFILE

STAAR REPORTING CATEGORY 4: DATA ANALYSIS AND FINANCIAL LITERACY													
Standard	**TEKS**	**Student Expectation**	**Class Performance**										
Supporting	8.5(C)	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	16	42	74	89	113						
Readiness	8.5(D)	use a trend line that approximates the linear relationship between bivariate sets of data to make predictions	6	14	15	26	30	38	41	47	50	61	
			69	70	83	90	98	102	105				
Supporting	8.11(A)	construct a scatterplot and describe the observed data to address questions of association such as linear, non-linear, and no association between bivariate data	7	46	76	95	111						
Supporting	8.11(B)	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	9	29	58	94	106						
Supporting	8.12(A)	solve real-world problems comparing how interest rate and loan length affect the cost of credit	10	34	78								
Supporting	8.12(C)	explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time	32	56	96	117							
Readiness	8.12(D)	calculate and compare simple interest and compound interest earnings	3	4	12	23	27	35	49	53	59	63	
			73	75	84	87	92	107	114				
Supporting	8.12(G)	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	36	80	109	115							

TEKSING TOWARD STAAR

MATHEMATICS ®

Grade 8

Student Profile for Spiraled Practice

Student _____

Teacher _____

GRADE 8 TEKSING TOWARD STAAR MATHEMATICS STUDENT PROFILE

STAAR REPORTING CATEGORY 1: NUMERICAL REPRESENTATIONS AND RELATIONSHIPS												
Standard	**TEKS**	**Student Expectation**	**Student Performance**									
Supporting	8.2(A)	extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers	21	54	71	81	101					
Supporting	8.2(B)	approximate the value of an irrational number, including π and square roots of numbers less than 225, and locate that rational number approximation on a number line	1	45	78	82	120					
Supporting	8.2(C)	convert between standard decimal notation and scientific notation	13	31	65	91	112	117				
Readiness	8.2(D)	order a set of real numbers arising from mathematical and real-world contexts	2	6	11	18	22	26	33	38	42	51
			53	55	62	67	73	86	93	98	105	110

GRADE 8 TEKSING TOWARD STAAR MATHEMATICS STUDENT PROFILE

STAAR REPORTING CATEGORY 2: COMPUTATIONS AND ALGEBRAIC RELATIONSHIPS													
Standard	**TEKS**	**Student Expectation**	**Student Performance**										
Supporting	8.4(A)	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	25	59	68	118							
Readiness	8.4(B)	graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship	1	8	19	21	28	33	48	56	64	66	
			76	85	92	97	103	108	111	116			
Readiness	8.4(C)	use data from a table or graph to determine the rate of change or slope and *y*-intercept in mathematical and real-world problems	9	12	17	22	29	34	43	58	62	67	
			73	81	89	95	101	104	109				
Supporting	8.5(A)	represent linear proportional situations with tables, graphs, and equation in the form of $y = kx$.	10	39	68	94	105						
Supporting	8.5(B)	represent linear non-proportional situation with tables, graphs, and equations in the form of $y = mx + b$, where $b \neq 0$	11	41	74	100	107						
Supporting	8.5(E)	solve problems using direct variation	2	24	44	70	90	114					
Supporting	8.5(F)	distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form of $y = kx$ or $y = mx + b$, where $b \neq 0$	14	39	43	88	120						
Readiness	8.5(G)	identify functions using sets of ordered pairs, tables, mappings, and graphs	3	8	17	23	28	40	45	48	63	57	
			64	69	72	83	93	97	102	113	115		
Supporting	8.5(H)	identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems	4	40	55	79	96	118					
Readiness	8.5(I)	write an equation in the form $y = mx + b$, to model a linear relationship between verbal, numerical, tabular, and graphical representations	5	13	20	24	31	35	46	51	54	57	
			61	65	71	82	91	99	103	110	118		
Supporting	8.8(A)	write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants	19	37	50	77	116						
Supporting	8.8(B)	write a 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	15	30	52	63	86	107					
Readiness	8.8(C)	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	6	16	20	26	32	37	44	50	60	72	
			75	77	84	88	89	112	119				
Supporting	8.9(A)	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	18	36	60	79	86						

GRADE 8 TEKSING TOWARD STAAR MATHEMATICS STUDENT PROFILE

STAAR REPORTING CATEGORY 3: GEOMETRY AND MEASUREMENT														
Standard	**TEKS**	**Student Expectation**	**Student Performance**											
Supporting	8.3(A)	generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation	9	23	45	77	85							
Supporting	8.3(B)	compare and contrast the attributes of a shape and its dilations(s) on a coordinate plane	5	51	71	87	102							
Readiness	8.3(C)	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	2	14	20	22	39	41	47	55	61	65		
			70	83	90	92	103	109	112					
Supporting	8.6(A)	describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height	27	29	57	69	87	120						
Supporting	8.6(C)	use models and diagrams to explain the Pythagorean Theorem	7	52	75	93	119							
Readiness	8.7(A)	solve problems involving the volume of cylinders, cones, and spheres	1	11	15	24	33	36	42	47	63	67		
			84	91	96	106	111	116						
Readiness	8.7(B)	use previous knowledge of surface area to make connections to the formula for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms and cylinders	3	18	25	38	40	43	48	55	64	72		
			81	94	101	107								
Readiness	8.7(C)	use the Pythagorean Theorem and its converse to solve problems	4	16	19	25	28	37	44	53	62	78		
			88	97	104	110	114							
Supporting	8.7(D)	determine the distance between two points on a coordinate plane using the Pythagorean Theorem	8	34	50	80	99	117						
Supporting	8.8(D)	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	12	30	58	79	82							
Supporting	8.10(A)	generalize the properties of orientation and congruence of rotations, reflections, translations, and dilations of two-dimensional shapes on a coordinate plane	7	31	60	98	108							
Supporting	8.10(B)	differentiate between transformations that preserve congruence and those that do not	10	32	68	100	115							
Readiness	8.10(C)	explain the effects translations, reflections over the x- or y-axis, and rotations limited to $90°$, $180°$, $270°$, and $360°$ as applied to two-dimensional shapes on a coordinate plane using an algebraic representation	13	17	21	35	45	49	56	66	80	89		
			95	100	104	106								
Supporting	8.10(D)	model the effect on linear and area measurements of dilated two-dimensional shapes	5	27	59	66	86	118						

GRADE 8 TEKSING TOWARD STAAR MATHEMATICS STUDENT PROFILE

STAAR REPORTING CATEGORY 4: DATA ANALYSIS AND FINANCIAL LITERACY													
Standard	**TEKS**	**Student Expectation**	**Student Performance**										
Supporting	8.5(C)	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	16	42	74	89	113						
Readiness	8.5(D)	use a trend line that approximates the linear relationship between bivariate sets of data to make predictions	6	14	15	26	30	38	41	47	50	61	
			69	70	83	90	98	102	105				
Supporting	8.11(A)	construct a scatterplot and describe the observed data to address questions of association such as linear, non-linear, and no association between bivariate data	7	46	76	95	111						
Supporting	8.11(B)	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	9	29	58	94	106						
Supporting	8.12(A)	solve real-world problems comparing how interest rate and loan length affect the cost of credit	10	34	78								
Supporting	8.12(C)	explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time	32	56	96	117							
Readiness	8.12(D)	calculate and compare simple interest and compound interest earnings	3	4	12	23	27	35	49	53	59	63	
			73	75	84	87	92	107	114				
Supporting	8.12(G)	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	36	80	109	115							