TEKSING TOWARD STAAR

MATHEMATICS ®

GRADE 7

Open-Ended Skills and Concepts

Organized by TEKS Categories

GRADE 7 OPEN-ENDED SKILLS and CONCEPTS

OVERVIEW

This document was created with all students in mind and provides teachers with sets of 5 open-ended questions to assess student mastery of TEKS assessed on STAAR. Each set of questions in this document is correlated to a specific Category and TEKS. These materials can be utilized for guided practice, independent practice, or homework. These materials can be utilized with a whole class, small groups, and/or tutorial settings.

NOTE: There is NO answer key provided for the Skills and Concepts problems as the authors' philosophy is that each teacher create a personalized Solutions Manual so the teacher becomes more familiar with the Revised TEKS and assessment of the Revised TEKS, as well as formulates various solution strategies for each question.

AUTHORS' VISION FOR IMPLEMENTATION

SKILLS AND CONCEPTS

- Skills and Concepts are open-ended questions that are organized by individual TEKS. Each Skills and Concepts includes 5 open-ended questions.
- The teacher sets the time limit prior to the students beginning the Skills and Concepts if the material is being utilized for independent practice.
- Students work on Skills and Concepts in partner pairs even during independent practice. Partner pairs are given specific "share questions" on the Skills and Concepts. The process that should be followed by all partner pairs is to complete the question(s) they are assigned to share, and then work on the other questions until time is called.
- The teacher calls time and the partner pairs guide class discussion on their "share questions" assignments. Students who did not complete the Skills and Concepts prior to the time limit may record on their individual papers during the discussion time but must record in a different color.
- A Skills and Concepts should NOT be sent home for homework until the majority of the class has demonstrated mastery of the TEKS addressed.

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Mathematical Process Standards

These student expectations will not be listed separately. They will be incorporated into assessments for TEKS in other categories since the application of mathematical process standards is part of each knowledge statement for all other TEKS.

7.(1) Mathematical Process Standards

The student uses mathematical processes to acquire and demonstrate mathematical understanding.

TEKS	STUDENT EXPECTATION
7.1(A)	apply mathematics to problems arising in everyday life, society, and the workplace
7.1(B)	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
7.1(C)	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
7.1(D)	communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate
7.1(E)	create and use representations to organize, record, and communicate mathematical ideas
7.1(F)	analyze mathematical relationships to connect and communicate mathematical ideas
7.1(G)	display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication

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Category 1: Number and Operations

7.(2) Number and Operations
The student applies mathematical process standards to represent and use rational numbers in a variety of forms.

STAAR Standard	TEKS	STUDENT EXPECTATION
Supporting	**7.2(A)**	extend previous knowledge of sets and subsets using visual representations to describe relationships between sets of rational numbers

7.(3) Number and Operations
The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions.

STAAR Standard	TEKS	STUDENT EXPECTATION
Supporting	**7.3(A)**	add, subtract, multiply, and divide rational numbers fluently
Readiness	**7.3(B)**	apply and extend previous understanding of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers

Category 2: Proportionality

7.(4) Proportionality

The student applies mathematical process standards to represent and solve problems involving proportional relationships.

STAAR Standard	TEKS	STUDENT EXPECTATION
Readiness	**7.4(A)**	represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical and algebraic representations, including $d = rt$
Supporting	**7.4(B)**	calculate unit rates from rates in mathematical and real-world problems
Supporting	**7.4(C)**	determine the constant of proportionality ($k = y/x$) within mathematical and real-world problems
Readiness	**7.4(D)**	solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems
Supporting	**7.4(E)**	convert between measurement systems, including the use of proportions and the use of unit rates

Proportionality

7.(5) Proportionality

The student applies mathematical process standards to use geometry to describe or solve problems involving proportional relationships.

STAAR Standard	TEKS	STUDENT EXPECTATION
Supporting	**7.5(A)**	generalize the critical attributes of similarity, including ratios within and between similar shapes
Supporting	**7.5(B)**	describe π as the ratio of the circumference of a circle to its diameter
Readiness	**7.5(C)**	solve mathematical and real-world problems involving similar shapes and scale drawings

Proportionality

7.(6) Proportionality

The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships.

STAAR Standard	TEKS	STUDENT EXPECTATION
Supporting	**7.6(A)**	represent sample spaces for simple and compound events using lists and tree diagrams
Not Tested	**7.6(B)**	select and use different simulations to represent simple and compound events with and without technology
Supporting	**7.6(C)**	make predictions and determine solutions using experimental data for simple and compound events
Supporting	**7.6(D)**	make predictions and determine solutions using theoretical probability for simple and compound events
Supporting	**7.6(E)**	find the probabilities of a simple event and its complement and describe the relationship between the two

Category 2: Proportionality

7.(6) Proportionality

The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships.

STAAR Standard	TEKS	STUDENT EXPECTATION
Not tested	**7.6(F)**	use data from a random sample to make inferences about a population
Readiness	**7.6(G)**	solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents
Readiness	**7.6(H)**	solve problems using qualitative and quantitative predictions and comparisons from simple experiments
Readiness	**7.6(I)**	determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces

Category 3: Expressions, Equations, and Relationships

7.(7) Expressions, Equations, and Relationships
The student applies mathematical process standards to represent linear relationships using multiple representations.

STAAR Standard	TEKS	STUDENT EXPECTATION
Readiness	**7.7(A)**	represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form $y = mx + b$

Expressions, Equations, and Relationships

7.(8) Expressions, Equations, and Relationships
The student applies mathematical process standards to develop geometric relationships with volume.

STAAR Standard	TEKS	STUDENT EXPECTATION
Not Tested	**7.8(A)**	model the relationship between the volume of a rectangular prism and a rectangular pyramid having both congruent bases and heights and connect the relationship to the formulas
Not Tested	**7.8(B)**	explain verbally and symbolically the relationship between the volume of a triangular prism and a triangular pyramid having both congruent bases and heights and connect that relationship to the formulas
Not Tested	**7.8(C)**	use models to determine the approximate formulas for the circumference and area of a circle and connect the models to the actual formulas

Expressions, Equations, and Relationships

7.(9) Expressions, Equations, and Relationships
The student applies mathematical process standards to solve geometric problems.

STAAR Standard	TEKS	STUDENT EXPECTATION
Readiness	**7.9(A)**	solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramid
Readiness	**7.9(B)**	determine the circumference and area of circles
Readiness	**7.9(C)**	determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles
Supporting	**7.9(D)**	solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism and triangular pyramid by the determining the area of the shape's net

Expressions, Equations, and Relationships

7.(10) Expressions, Equations, and Relationships
The student applies mathematical process standards to use one-variable equations and inequalities to represent situations.

STAAR Standard	TEKS	STUDENT EXPECTATION
Supporting	**7.10(A)**	write one-variable two-step equations and inequalities to represent constraints or conditions within the problem

Category 3: Expressions, Equations, and Relationships

7.(10) Expressions, Equations, and Relationships
The student applies mathematical process standards to use one-variable equations and inequalities to represent situations.

STAAR Standard	TEKS	STUDENT EXPECTATION
Supporting	**7.10(B)**	represent solutions for one-variable, two-step equations and inequalities on number lines
Supporting	**7.10(C)**	write a corresponding real-world problems given one-variable, two-step equation or inequality

Expressions, Equations, and Relationships

7.(11) Expressions, Equations, and Relationships
The student applies mathematical process standards to solve one-variable equations and inequalities.

STAAR Standard	TEKS	STUDENT EXPECTATION
Readiness	**7.11(A)**	model and solve one-variable, two-step equations and inequalities
Supporting	**7.11(B)**	determine if the given value(s) make(s) one-variable, two-step equations and inequalities true
Supporting	**7.11(C)**	write and solve equations using geometry concepts including the sums of angles in a triangle, and angle relationships

Category 4: Measurement and Data

7.(12) Measurement and Data
The student applies mathematical process standards to use statistical representations to analyze data.

STAAR Standard	TEKS	STUDENT EXPECTATION
Readiness	**7.12(A)**	compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads
Supporting	**7.12(B)**	use data from random sample to make inferences about a population
Supporting	**7.12(C)**	compare two populations bases on data in random samples from these populations, including informal comparative inferences about differences between the two populations

Category 5: Personal Financial Literacy

7.(13) Personal Financial Literacy

The student applies mathematical processes standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor.

STAAR Standard	TEKS	STUDENT EXPECTATION
Supporting	**7.13(A)**	calculate the sales tax for a given purchase and calculate income tax for earned wages
Supporting	**7.13(B)**	identify the components of a personal budget, including income; planned savings for college, retirement, and emergencies; and fixed and variable expenses, and calculate what percentage each category comprises of the total budget
Supporting	**7.13(C)**	create and organize a financial assets and liabilities record and construct a net worth statement
Supporting	**7.13(D)**	use a family budget estimator to determine the minimum household budget and average hourly wage needed for a family to meet its basic needs in the student's city or another large city nearby
Supporting	**7.13(E)**	calculate and compare simple interest and compound interest earnings
Supporting	**7.13(F)**	analyze and compare monetary incentives, including sales, rebates, and coupons

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MATHEMATICS ®

GRADE 7

Open Ended Skills and Concepts

TEKS CATEGORY 1

Numbers and Operations

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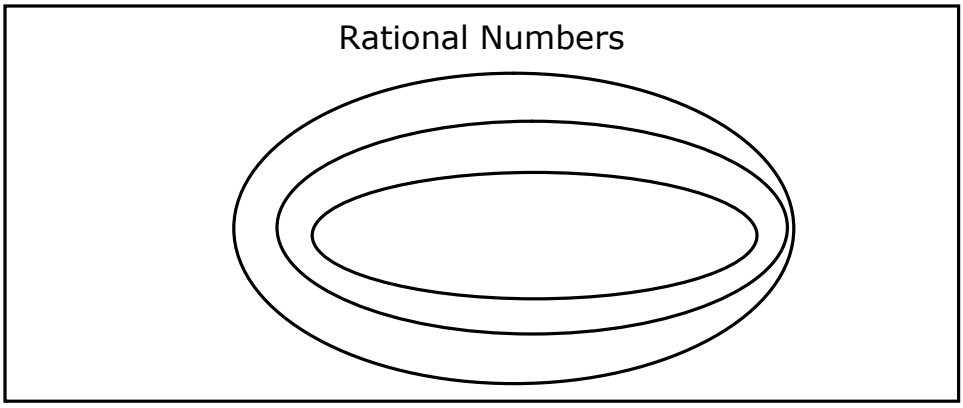
GRADE 7

Open Ended Skills and Concepts

TEKS CATEGORY 1
7.2A

7.2A Skills and Concepts 1

1. Fill in the Venn diagram below showing the relationship of rational numbers, integers, natural numbers, and whole numbers.



2. Place a √ in each column that the given number belongs to.

	Rational Number	Integer	Whole Number	Natural Number
-2.5				
-6				
119				
$\frac{5}{8}$				
$0.\overline{4}$				

3. Name 3 rational numbers that are NOT integers.

4. Name 3 rational numbers that are NOT positive.

5. Name a rational number that is located between 20.5 and 20.6 on a number line. How do you know it is rational?

7.2A Skills and Concepts 2

1. In your own words, describe a rational number. List three rational numbers.

2. In your own words, describe an integer. List three integers.

3. Label each statement as true or false.

   _____1. 14 is an integer.

   _____2. -7 is a rational number.

   _____3. -14 is a whole number.

   _____4. $\frac{14}{7}$ is an integer.

   _____5. If two rational numbers are divided, the quotient is always a rational number.

   _____6. If two non-zero rational numbers are divided, the quotient is always a rational number.

4. Name 3 integers that are between -18 and -12 on a number line.

5. Name a rational number that is located between 36 and 37 on a number line. How do you know it is rational?

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Open Ended Skills and Concepts

TEKS CATEGORY 2

Proportionality

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GRADE 7

Open Ended Skills and Concepts

TEKS CATEGORY 2
7.4B

7.4B Skills and Concepts 1

1. Rebecca paid $3.60 for a dozen apples. What was the unit cost per apple? Show your work.

2. The table below shows the cost of 4 new tires at 4 different tire stores.

Cost of 4 New Tires

Store	Cost
Matt's Tires	$320
Cheaper Tires	$300
Love's Tires	$350
Wheels and Tires	$325

What is the unit cost per tire at each of the 4 stores? Show your work.

How much less would a tire cost at Matt's Tires than at Love's Tires?

3. Susie wants to enter a typing contest. One must be able to type at least 45 words per minute to qualify to enter. To see if she qualified for the contest, Susie took a test and she could type 12 words in 15 seconds. Did she qualify for the contest? How did you decide?

4. Marty and his friend, Jonas, each drove to their grandparents' home for the weekend. Marty drove 260 miles in 4 hours 20 minutes. Jonas drove 180 miles in 3 hours 20 minutes. Which boy had the faster unit rate?

5. Beau needs to ride his bike to his friend's house that is 8 miles away. He is riding at an average rate of 15 miles per hour. He has 30 minutes to get to the friend's house. Will he make it? Explain your answer.

7.4B Skills and Concepts 2

1. Which of the following are unit rates? Circle the unit rates.

   100 miles every 2 hours 2 nickels per dime $3.50 per gallon

   What is a unit rate?

2. Which of the following is the best buy? (least unit rate)

   3 pair of pants for $120 5 pair of pants for $150 2 pair of pants for $55

   The _____ pair of pants for $_____ has the least unit rate of $ _____ per pair of pants.

3. Steve drove from Idabel, Oklahoma, to Fort Worth, Texas, which is 200 miles and then on to Hillsboro, Texas, which is 55 miles. The entire trip took him 5 hours. What was his rate in miles per hour? Show your work.

4. Janis earned $34 for babysitting her neighbor's two children for 4 hours 15 minutes. What was her pay per hour?

5. Richey hiked 6.75 miles in 90 minutes. What was his hiking rate in miles per hour?

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GRADE 7

Open Ended Skills and Concepts

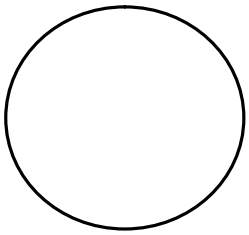
TEKS CATEGORY 2
7.6D

7.6D Skills and Concepts 1

1. You will toss a coin and roll a 1-6 number cube at the same time. What is the probability of tossing a head and rolling a 3? Show your work.

2. Design a spinner with 4 different numbers so that the probability of spinning an even number is $\frac{1}{3}$.

   Record your design below.



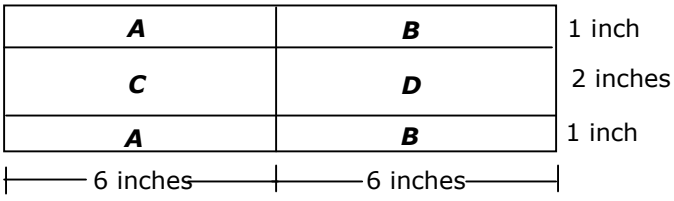
3. Juanita will draw one tile from a set of the 26 tiles each representing one of the letters of the alphabet. What is the probability she will draw a letter in her name? Show your work.

4. A set of ten cards numbered 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9 are placed face down on a table. If a card is drawn at random, what is the probability a number card greater than 5 will be drawn? Show your work.

   Favorable outcomes: _____

   Total outcomes: _____ Probability of number greater than 5:

5. A 4-inch by 12-inch rectangle is represented below.



   If a point is randomly selected from inside the large rectangle, what is the probability the point will be located in an *A* section?

   If a point is randomly selected from inside the large rectangle, what is the probability the point will be located in the *C* section?

   If a point is randomly selected from inside the large rectangle, what is the probability the point will be located in a *B* section?

7.6D Skills and Concepts 2

1. You will toss two different number cubes at the same time. The sides of the first cube are numbered 1-6 and the sides of the second cube are numbered 7-12. What is the probability of rolling a 3 and rolling a 10? Show your work.

2. What is the probability you will roll a 5 on a number cube numbered 1-6? Explain your answer.

   Predict the number of times you would expect the number cube to land on a 5 if you roll it 60 times.

3. You will roll two number cubes numbered 1-6 at the same time.
   - Create a tree diagram to represent the possible outcomes of the roll of the two number cubes.

   - What is the probability the two numbers you roll will have a sum of 7? Show your work.

4. You have a spinner with 4 equal sections labeled 1, 2, 3, and 4. You have a second spinner with 3 equal sections labeled A, B, and C.
   - Sketch the two spinners.

   - What is the probability you will spin a 2 and an A if you spin each spinner one time? Show your work.

5. Reynaldo tossed a quarter and 3 dimes at the same time. The quarter landed heads up. What is the probability that all of the dimes also landed heads up? Show your work.

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Open Ended Skills and Concepts

TEKS CATEGORY 3

Expressions, Equations, and Relationships

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GRADE 7

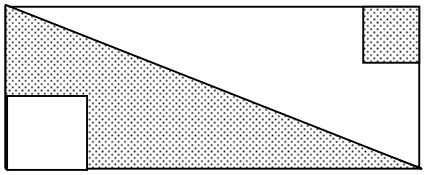
Open Ended Skills and Concepts

TEKS CATEGORY 3
7.9C

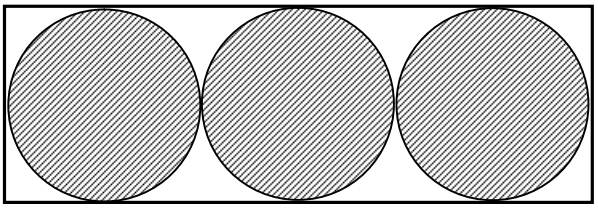
7.9C Skills and Concepts 1

1. Design a composite figure that consists of at least three regions so that the area of the figure is 120 square units. Write an explanation for how you composed your figure.

2. What is the area of the shaded part in the rectangle below? Show your work to support your answer. The rectangle has a width of 5 units and a length of 12 units. The two squares have side lengths of 2.5 units and 1.5 units.

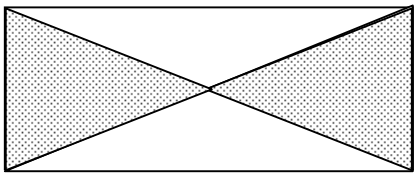


3. Write a plan to find the area of the rectangle that is not contained in the circles in the composite figure below. This would be the non-shaded area. Be sure your plan includes any formulas you would use and any dimensions you must find.



18 inches

4. What is the area of the shaded part in the rectangle below? Show your work to support your answer. The rectangle has a width of 8 units and a length of 20 units.

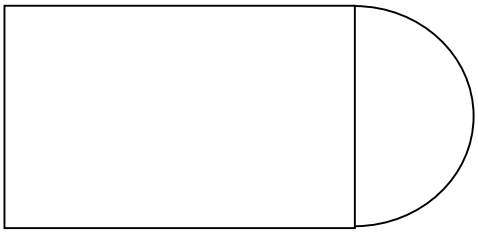


5. Design a composite figure that contains a trapezoid, a parallelogram and a semicircle. Find the area of your figure.

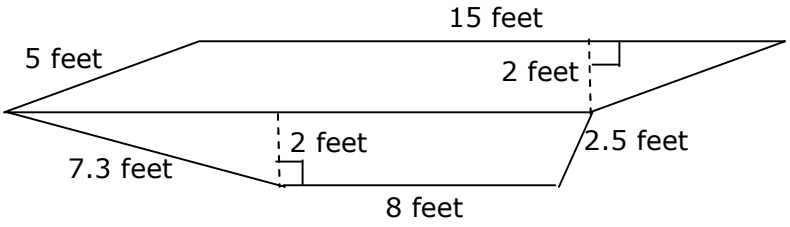
7.9C Skills and Concepts 2

1. Design a composite figure that consists of at least three regions so that the area of the figure is 200 square units.

2. Find the area of the composite figure below. The semicircle has a diameter of 8 inches. The rectangle has dimensions of 8 inches and 12 inches.



3. Find the area of the composite figure shown below.



4. Using your ruler, measure the required dimensions to the nearest centimeter to find the area of the composite figure. Label those measurements on the figure

Make a plan to find the area of the composite figure.

5. Find the area of the figure above using your measurements and your plan. Show your work.

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GRADE 7

Open Ended Skills and Concepts

TEKS CATEGORY 3
7.10A

7.10A Skills and Concepts 1

1. The width of a rectangle is 6 inches less than the length, x, of the rectangle. The rectangle's perimeter is 48 inches. Write an equation that can be used to find the value of x.

2. Mr. Davis works for $2,400 per month plus a 10% commission on his total sales. He wants to earn at least $3,000 next month. Write an inequality that can be used to determine the amount of sales, s, he needs to meet his goal.

3. Marty has more than $3.50 in nickels and quarters. He has 10 nickels. Write an inequality that can be used to determine the number of quarters, q, he has.

4. One angle of a triangle measures 75°. The second angle of the triangle is 35° more than the measure of the smallest angle, x. Write an equation that can be used to find the measure of the smallest angle of the triangle.

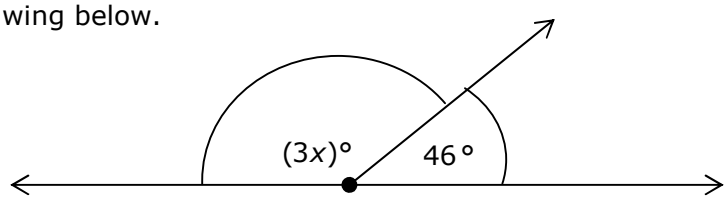
5. Two angles are supplementary. One angle has a measure that is 15° more than twice the smaller angle. Write an equation that can be used to find the measure of the smaller angle, x.

7.10A Skills and Concepts 2

1. Kenny mows lawns. He now has 10 more than twice as many customers as he had last year. He now has 34 customers. Write an equation that can be used to find the value of *x,* the number of customers he had last year.

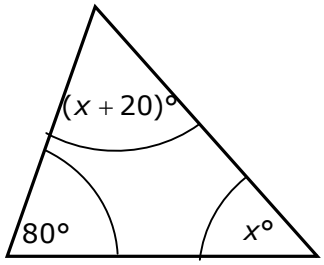
2. Billy has $25 to spend on a pizza. A large pizza costs $16 plus $1.75 for each additional topping. Write an inequality that can be used to determine the number of toppings, *t*, Billy can order for his pizza and stay within his budget.

3. Look at the drawing below.



Write an equation that can be used to determine the value of *x*.

4. Look at the triangle below.



Write an equation that can be used to find the value of *x*.

5. The perimeter of a rectangle is at least 100 centimeters. The length of the rectangle is 32 centimeters. Write an inequality that can be used to determine possible values of the width, *w*, of the rectangle.

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TEKS CATEGORY 4

Measurement and Data

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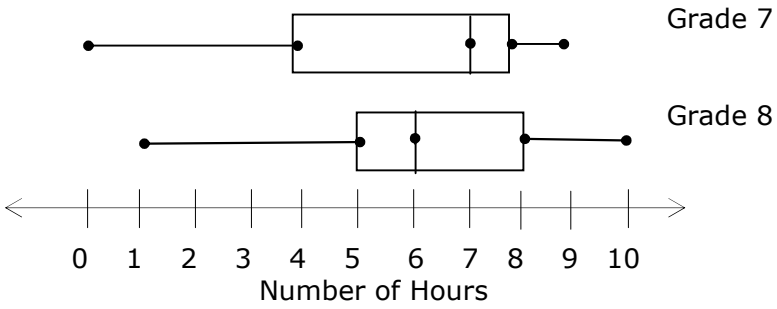
Open Ended Skills and Concepts

TEKS CATEGORY 4
7.12A

7.12A Skills and Concepts 1

1. Look at the two box plots below illustrating the number of hours students in grade 7 and grade 8 spent on their cell phone during one day last week.



Compare the centers for the two box plots: _____

_____

Compare the spread of the two box plots: _____

_____

Compare the two shapes of the data in the two box plots: _____

_____

2. Create two dot plots for the data below for hours spent on homework last week.

Room A: 0, 0, 1, 1, 1, 2, 2, 3, 3, 3, 3, 3, 4, 4, 5, 5, 5, 6, 6, 7, 7
Room B: 0, 1, 1, 1, 1, 2, 2, 3, 3, 3, 3, 4, 4, 4, 5, 6, 6, 6, 6, 7, 8

Compare the centers for the two dot plots: _____

_____

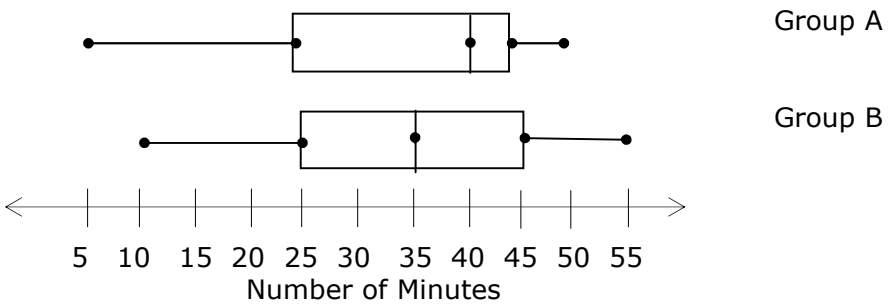
Compare the spread of the two dot plots: _____

_____

Compare the two shapes of the data in the two dot plots: _____

_____

3. Look at the two box plots below illustrating the number of minutes workers spend driving to work each morning for two different groups of workers.



Compare the centers for the two box plots: _____

_____

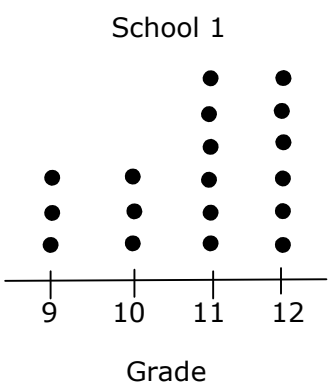
Compare the spread of the two box plots: _____

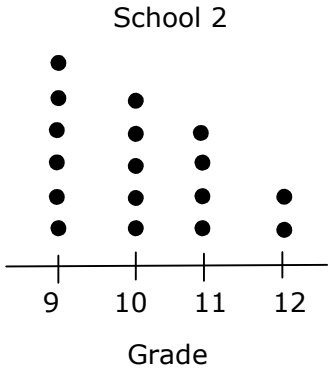
_____

Compare the two shapes of the data in the two box plots: _____

_____

4. The dot plots show the number of students in the high school choir in two high schools in Hebron Independent School District.





Complete the following statements:
School _____ has more grade 11 and 12 students in the choir than School _____ has in grades 11 or 12.

School 1 has a center of _____ and School 2 has a center of _____.

School _____ has more students in choir than School _____.

School 1 has_____ more grade 9 students in choir than School 2 has grade 9 students.

5. Make 2 box plots for the following data showing the numbers of hours two random groups of citizens spend outdoors during the summer from Friday to Sunday.

Group 1: 6, 6, 6, 7, 7, 9, 9, 10, 10, 10, 11, 12, 13, 14, 15, 15, 20
Group 2: 5, 6, 6, 7, 8, 9, 10, 10, 10, 10, 11, 12, 13, 14, 15, 15, 18

Compare the centers for the two box plots: _____

_____

Compare the spread of the two box plots: _____

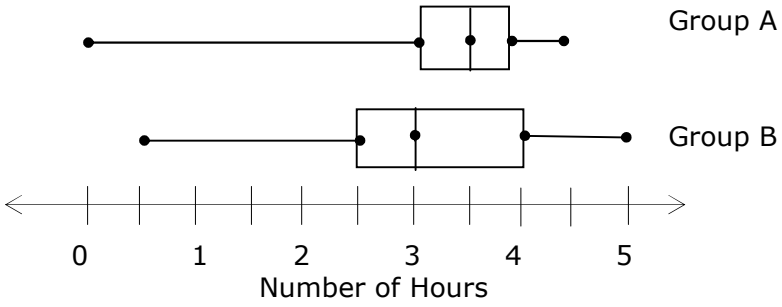
_____

Compare the two shapes of the data in the two box plots: _____

_____

7.12A Skills and Concepts 2

1. Look at the two box plots below illustrating the numbers of hours two different groups of students spent exercising per week.



Compare the centers for the two box plots: _____

_____

Compare the spread of the two box plots: _____

_____

Compare the interquartile range of the two box plots: _____

_____

2. Create two dot plots for the data below for miles ran per week by two different groups of adults.

Group A: 3, 3, 3, 3, 3, 4, 4, 5, 5, 5, 6, 6, 7, 7, 8, 9, 10, 10
Group B: 4, 4, 4, 5, 6, 6, 6, 6, 7, 8, 8, 9, 9, 10, 10, 11, 11

Compare the centers for the two dot plots: _____

_____

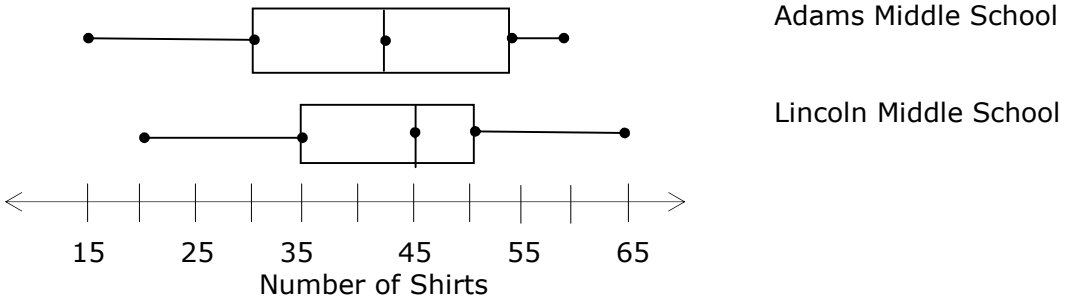
Compare the spread of the two dot plots: _____

_____

Compare the most common number of miles for each group: _____

_____

3. Look at the two box plots below illustrating the number of spirit shirts sold daily by the booster clubs of two different schools during the last ten days.



Compare the centers for the two box plots: _____

_____

Compare the spread of the two box plots: _____

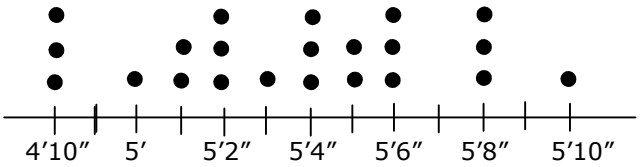
_____

Compare the interquartile range for the two box plots: _____

_____

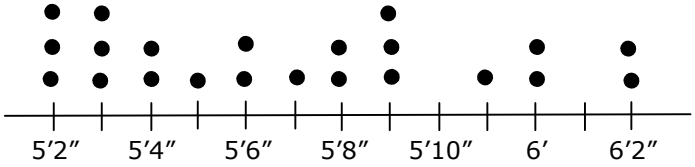
4. The dot plots show the heights of the girls' basketball team and the boy's basketball team at Edison Middle School.

Girls' Heights



Heights

Boys' Heights



Heights

Compare the centers for the two dot plots: _____

_____

Compare the spread of the two dot plots: _____

_____

5. Make 2 box plots for the following data showing the numbers of minutes two random groups of shoppers spent in the new superstore on the first day of its grand opening.

Group 1: 20, 20, 25, 25, 28, 29, 30, 30, 30, 32, 32, 40, 55
Group 2: 30, 30, 35, 35, 35, 40, 42, 43, 45, 45, 50, 53, 55

Compare the centers for the two box plots: _____

_____

Compare the spread of the two box plots: _____

_____

TEKSING TOWARD STAAR

MATHEMATICS ®

GRADE 7

Open Ended Skills and Concepts

TEKS CATEGORY 5

Personal Financial Literacy

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MATHEMATICS ®

GRADE 7

Open Ended Skills and Concepts

TEKS CATEGORY 5
7.13A

7.13A Skills and Concepts 1

1. In Texas, name 3 purchases you have to pay a sales tax on.

   In Texas, name 2 purchases you do NOT have to pay a sales tax on.

2. The state requires a 6.25% sales tax, but counties or cities can add to that for their local budgets. What is the maximum sales tax a business can charge in Texas?

   What does your location charge for sales tax?

3. If you bought $40 worth of food, $20 worth of medicine, and $60 worth of clothes, which items would you be paying a sales tax on? Assume you live in Texas.

   If the sales tax rate is 7.5%, what would your tax be?

4. You spent $45 on CDs. The sales tax on the CDs will be 8.2%. How much is your total bill?

5. An item cost $59.40 including an 8% sales tax. What was the cost before taxes?

7.13A Skills and Concepts 2

Use the tax table below to answer Questions 1-5.

If Form 1040 line 43 (taxable income) is-		You are Single	Married filing jointly
At least	But less than	Your tax is-	Your tax is-
$68,000	$68,050	$12,935	$9,311
$68,050	$68,100	$12,948	$9,319
$68,100	$68,150	$12,960	$9,326
$68,150	$68,200	$12,973	$9,334
$68,200	$68,250	$12,985	$9,341

1. As the taxable income increases $50, do you see a pattern in the amount the tax increases for a single person?

   As the taxable income increases $50, do you see a pattern in the amount the tax increases for married filing jointly?

2. Mr. James is single with a taxable income of $68,100. How much tax does he owe? _____
   If his withholding is $10,340, does he get a refund or have to pay?
   How much is the refund, or what does he still have to pay?

3. Ms. Simeon is single with a taxable income of $68,200. How much tax does she owe? _____
   If her withholding is $12,117, does she get a refund or have to pay?
   How much is the refund or what does she still have to pay?

4. Mr. and Mrs. Mulroy are filing jointly as a married couple with a taxable income of $68,025. How much tax do they owe? _____
   If their withholding is $9,315, do they get a refund or have to pay?
   How much is the refund, or what do they still have to pay?

5. Mr. and Mrs. Mixon are filing separately as a married couple. He has a taxable income of $68,125. Couples filing separately are taxed at the same rate as a single person.
   How much tax does he owe? _____
   If his withholding is $9,315, does he get a refund or have to pay?
   How much is the refund, or what does he still have to pay?