TEKSING TOWARD STAAR

MATHEMATICS®

# GRADE 5

# STAAR Format Skills and Concepts

## Organized by TEKS Categories

# TEKSING TOWARD STAAR MATHEMATICS®

## OVERVIEW
### Grade 5 Open-Ended Skills and Concepts

This document was created with all students in mind and provides teachers with sets of 5 open-ended questions to assess student mastery of all grade level TEKS, including the Process Standards TEKS, and the TEKS not assessed on STAAR. Each set of questions in this document is correlated to a specific Category and TEKS.

There are 8 sets of 5 open-ended questions to assess student mastery of each of the 7 Process Standards TEKS. Each question on each set is also correlated to another TEKS. There is one question in each of the sets for each of the Process Standards TEKS that addresses each of the grade level TEKS.

These materials can be utilized for guided practice, independent practice, or homework. These materials can be utilized with a whole class, or in small groups and/or tutorial settings.

**NOTE:** There is no answer key provided for the Skills and Concepts problems as the author's philosophy is that each teacher should 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. Teachers are encouraged to communicate with the author regarding discussion of any question in this document.

## AUTHOR'S 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 a time limit prior to 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, 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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## TEKS Category 1 - Mathematical Process Standards

### (5.1) Mathematical Process Standards

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

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## TEKS Category 2: Number and Operations

### (5.2) Number and Operations

The student applies mathematical process standards to represent, compare, and order positive rational numbers and understand relationships as related to place value.



### (5.3) Number and Operations

The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy.

# TEKS Category 3: Algebraic Reasoning

## (5.4) Algebraic Reasoning

The student applies mathematical process standards to develop concepts of expressions and equations.

# TEKS Category 4: Geometry and Measurement

## (5.5) Geometry and Measurement

The student applies mathematical process standards to classify two-dimensional figures by attributes and properties.

| STAAR Standard | TEKS | STUDENT EXPECTATION | Number of Skills & Concepts |
|---|---|---|---|
| **Readiness** | **5.5(A)** | classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties | 4 |

## (5.6) Geometry and Measurement

The student applies mathematical process standards to understand, recognize, and quantify volume.

| STAAR Standard | TEKS | STUDENT EXPECTATION | Number of Skills & Concepts |
|---|---|---|---|
| **Supporting** | **5.6(A)** | recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes (n cubic units) needed to fill it with no gaps or overlaps if possible | 4 |
| **Supporting** | **5.6(B)** | determine the volume of a rectangular prism with whole number side lengths in problems related to the number of layers times the number of unit cubes in the area of the base | 4 |

## ( 5.7) Geometry and Measurement

The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving measurement.

| STAAR Standard | TEKS | STUDENT EXPECTATION | Number of Skills & Concepts |
|---|---|---|---|
| **Supporting** | **5.7(A)** | solve problems by calculating conversions within a measurement system, customary or metric | |

## (5.8) Geometry and Measurement

The student applies mathematical process standards to identify locations on a coordinate plane.

| STAAR Standard | TEKS | STUDENT EXPECTATION | Number of Skills & Concepts |
|---|---|---|---|
| **Supporting** | **5.8(A)** | describe the key attributes of the coordinate plane, including perpendicular number lines (axes) where the intersection (origin) of the two lines coincides with zero on each number line and the given point (0, 0); the x-coordinate, the first number in an ordered pair, indicates movement parallel to the x-axis starting at the origin; and the y-coordinate, the second number, indicates movement parallel to the y-axis starting at the origin | **Supporting** |
| **Supporting** | **5.8(B)** | describe the process for graphing ordered pairs of numbers in the first quadrant of the coordinate plane | **Supporting** |
| **Readiness** | **5.8(C)** | graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table. | **Readiness** |

## TEKS Category 5: Data Analysis

**(5.9) Data Analysis**
The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data.

| STAAR Standard | TEKS | STUDENT EXPECTATION | Number of Skills & Concepts |
|---|---|---|---|
| **Supporting** | **5.9(A)** | represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots | 4 |
| **Supporting** | **5.9(B)** | represent discrete paired data on a scatterplot | 4 |
| **Readiness** | **5.9(C)** | Solve one- and two-step problems using data from a frequency table, cot plot, bar graph, stem-and-leaf plot, or scatterplot | 4 |

## TEKS Category 6: Personal Financial Literacy

**(5.10) Personal Financial Literacy**
The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security.

| STAAR Standard | TEKS | STUDENT EXPECTATION | Number of Skills & Concepts |
|---|---|---|---|
| **Supporting** | **5.10(A)** | define income tax, payroll tax, sales tax, and property | 2 |
| **Supporting** | **5.10(B)** | explain the difference between gross income and net | 2 |
| **Not Tested** | **5.10(C)** | Identify the advantages and disadvantages of different methods of payment, including check, credit card, debit card, and electronic payments | 1 |
| **Not Tested** | **5.10(D)** | develop a system for keeping and using financial records | 1 |
| **Supporting** | **5.10(E)** | describe actions that might be taken to balance a budget expenses exceed income | 2 |
| **Supporting** | **5.10(F)** | balance a simple budget | 2 |

TEKSING TOWARD STAAR

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# GRADE 5

# Open-Ended Skills and Concepts

## TEKS CATEGORY 1

## Mathematical Process Standards

NAME_____ DATE_____ SCORE ___/10

## 5.1B Skills and Concepts 1

### 5.2A

1. Read the number in the place-value chart.

| Tens | Ones | . | Tenths | Hundredths | Thousandths |
|---|---|---|---|---|---|
| 6 | 0 | . | 0 | 6 | 0 |

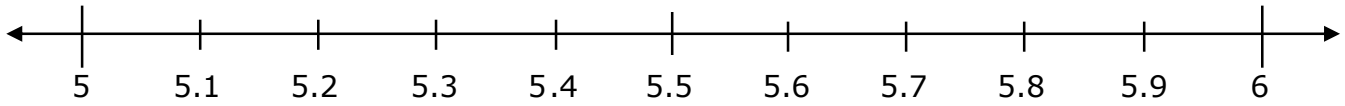
The number 60.060 in words is _____ *and* _____ _____.
Explain how you know your answer is correct.

### 5.2B

2. Cheri cut crepe paper streamers for her sister's surprise birthday party. The yellow streamer is 5.861 meters long, the red streamer is 5.453 meters long, the blue streamer is 5.809 meters long, and the green streamer is 5.464 meters long.

   Use a number line to compare the lengths of the yellow and blue streamers.

   • Place a point at the location of the length of each streamer. Label each point with the number it represents.




_____ > _____ and _____ < _____.

### 5.2C

3. Jason rounded the number 9.394 to the number shown below.

   9.39

   To which place value did he round 9.394? _____

### 5.3A

4. Lyle needs to save $235 to buy a new bicycle. He plans to mow lawns to earn money. He will charge $24 for each lawn he mows. Show your work to estimate the number of lawns he needs to mow to have enough money to buy the bicycle.

   Use compatible numbers to write two different estimates for the number of lawns he needs to mow.

   **Estimate.** 235 ÷ 24.

| **STEP 1** | | |
|---|---|---|
| Use two sets of compatible numbers to find two different estimates. | _____ ÷ _____<br>↓<br>_____ ÷ _____ | _____ ÷ _____<br>↓<br>_____ ÷ _____ |
| **STEP 2** | | |
| Use patterns and basic facts to help estimate. | _____ ÷ _____<br>↓<br>_____ ÷ _____ | _____ ÷ _____<br>↓<br>_____ ÷ _____ |

- Lyle will need to mow between _____ and _____ lawns to save enough money to buy the bicycle.
- The more reasonable estimate is _____ because _____ Lyle needs to make sure he has at least _____ to buy the bicycle.

So, Lyle needs to mow at least _____ lawns to have enough money for the bicycle.

**5.3B**

5. Henry ran around the track at school 12 times. The distance around the track is 440 yards. What was the total distance Henry ran? Show your work.

Henry ran a total distance of _____ yards around the track.
Use reverse factors to check your answer in the space above.

NAME_____ DATE_____ SCORE ___/10

## 5.1B Skills and Concepts 2

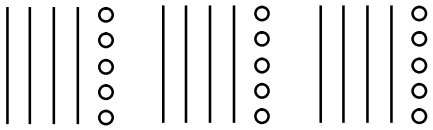
### 5.3C

1. A golf ball company packs 12 golf balls in a box. Find the number of boxes the company will use to pack 1,020 golf balls. Show your work to find the number of boxes the company will need.

So, the golf ball company will need _____ boxes to pack 1,020 golf balls.
Use multiplication to check your work in the space above.

### 5.3D

2. A multiplication problem can be solved using this model. Each line represents one tenth and each circle represents one hundredth.



The model shows the product of _____ and _____ is _____.

### 5.3E

3. A pattern is shown below.

$$1 \times 0.67 = 0.67$$
$$10 \times 0.67 = 6.7$$
$$100 \times 0.67 = 67$$

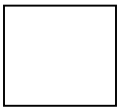
Write the equation that correctly represents the next product in this pattern.

_____ × _____ = _____

Explain how you know your answer is correct.

**5.3F**

4. Tyrell and 3 classmates are on a science project team. The team presentation of their project was a total of 5.40 minutes long. Each person on the team presented for the same amount of time. Draw a quick picture to represent the amount of time each team member presented.

Use  to represent 1,  to represent one tenth, and • to represent one hundredth.

Explain how you know your quick picture represents the amount of time each team member presented.

The model shows each team member presented for _____ minutes.

**5.3G**

5. Miguel drank 43.68 liters of water during a 12-day camping trip. What is the average amount of water he drank each day during the trip? Show your work to find the answer.

He drank an average of _____ liters of water each day during the trip.
Explain how you know your answer is correct.

NAME_____ DATE_____ SCORE ___/10

## 5.1B Skills and Concepts 4

### 5.4A

1. Decide which list contains exactly two prime numbers and two composite numbers.

   2, 3, 4, 5

   Does this list contain exactly two prime two composite numbers? _____
   Explain how you know your answer is correct.

   3, 4, 6, 9

   Does this list contain exactly two prime two composite numbers? _____
   Explain how you know your answer is correct.

   5, 7, 8, 15

   Does this list contain exactly two prime two composite numbers? _____
   Explain how you know your answer is correct.

   6, 8, 9, 11

   Does this list contain exactly two prime two composite numbers? _____
   Explain how you know your answer is correct.

### 5.4B

2. Owen scored 45 points on a computer game. He scored 16 fewer points than Darwin. How many points did Darwin score?

   Draw a strip diagram and write an equation to solve this problem. Show your work on notebook paper.

   Darwin scored _____ points.
   Explain how you know your answer is correct.

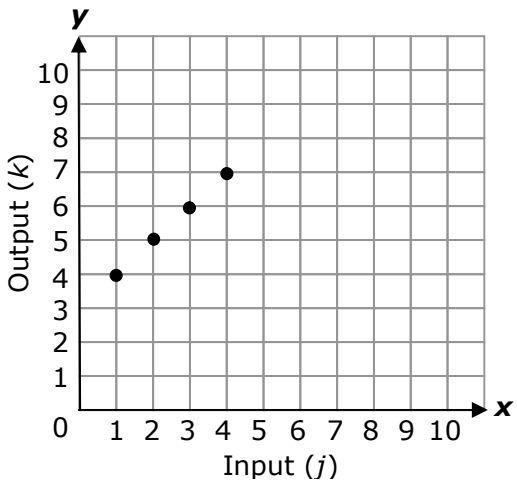
### 5.4C

3. The rule for the pattern in an input/output table is $g = f + 2$.

   What is the value of the output in the table if the input is 10? _____
   Explain how you know your answer is correct.

## 5.4D

4. The pattern in the graph represents the relationship between input, $j$, and output, $k$.




What rule describes the pattern on the graph? _____

Describe how you used the pattern in the graph to find the rule.

## 5.4E

5. Tina bought a notebook and 12 pencils that cost $0.35 each. She spent a total of $8.00. Write an expression that represents this situation.

Explain how the situation and the expression match.

NAME_____ DATE_____ SCORE ___/10

## 5.1B Skills and Concepts 5

**5.4F**

1. Simplify $4 \times [(12 + 4) - (12 \div 3)]$. Show your work on notebook paper.

   The expression _____ simplifies to _____.

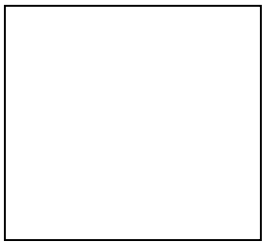
   Simplify $4 \times (16 - 4)$. Show your work on notebook paper.

   The expression _____ simplifies to _____.

   Explain why $4 \times [(12 + 4) - (12 \div 3)]$ and $4 \times (16 - 4)$ simplify to the same value.

**5.4H**

2. Find the area of a square with a side that is 9 meters long.




   • A square is a special _____.

   All four of a square's sides are the same _____.

   • A _____ can be used to find the area of a square.

   ***A***rea (square) is length of ***s***ide times length of ***s***ide

   $A = s \times s$

   Use the formula to find the area of the square.

   $A = s \times s$

   $A =$ _____m $\times$ _____m

   $A =$ _____ square meters

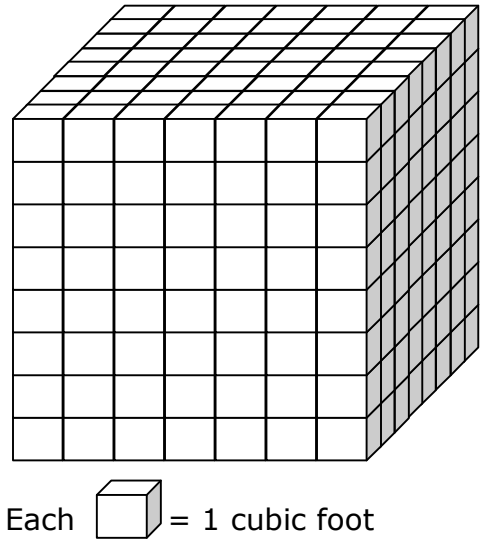
   The area of the square is _____ square _____.

**5.5A**

3. A triangle with 3 congruent sides is a(n) _____ triangle.
   Sketch three examples of this type of triangle on the top of the next page.

**5.6A**

4. The model below represents the volume of a storage shed that was built at Melissa's house.




What is the volume of the storage shed? Show your work to find the answer.

**5.6B**

5. Hidalgo is making rectangular prisms using 1-inch cubes. Each prism will be 6 inches tall. How many different bases can he make if each prism is made of exactly 24 one-inch cubes? Show your work to find the answer.

Explain how you know your answer is correct.

NAME_____ DATE_____ SCORE ___/10

## 5.1B Skills and Concepts 6

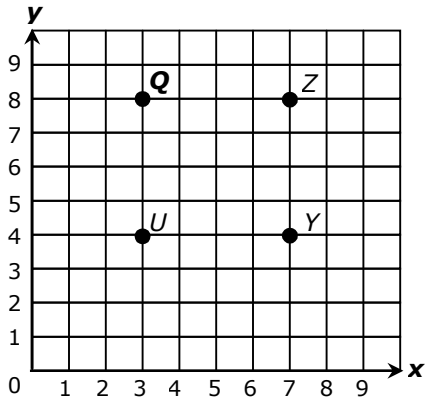
### 5.7A

1. Yvette needed 500 centimeters of ribbon. How many millimeters of ribbon did she need? Show your work to find the answer.

Explain how you know your answer is correct.

### 5.8A

2. Four points are located on a coordinate plane.




What coordinate pair represents the location of point *Q*? ( _____, _____)
Explain how you know your answer is correct.

What coordinate pair represents the location of point *Z*? ( _____, _____)
Explain how you know your answer is correct.

What coordinate pair represents the location of point *U*? ( _____, _____)
Explain how you know your answer is correct.

What coordinate pair represents the location of point *Y*? ( _____, _____)
Explain how you know your answer is correct.

**5.8B**

3. Trina started at the origin on a coordinate plane to plot the point (4, 7). Complete the following to describe the process she used to plot the point.

   She plotted the point (4, 7) at _____ units to the _____ of the _____

   and _____ units _____. Explain how you know the process is correct.

**5.8C**

4. The rule for the pattern in the table below is $c = f + 4$. If $f$ represents the $x$-coordinate and $c$ represents the $y$-coordinate, which ordered pair represents the point for Figure 3 on a coordinate plane?

Figures with Circles

| Figure Number, *f* | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Number of Circles, c | 5 | 6 | 7 | 8 |

   If *f* represents the *x*-coordinate and *c* represents the *y*-coordinate, what ordered pair represents the point for Figure 3 on a coordinate plane?

   (_____, _____)

   Explain how you know your answer is correct.

**5.9A**

5. The members a cross country track team are practicing for a meet. They practice running through the woods. The team coach recorded the distances they ran, then he made a frequency table to show the data.

| Distance Ran During Practice | |
|---|---|
| Distance (in miles) | Number of Team Members |
| 1.1 | 8 |
| 1.4 | 4 |
| 1.8 | 11 |
| 2.2 | 9 |
| 2.6 | 3 |

   • How many team members ran more than 2 miles during practice? _____

   • How many team members ran during practice? _____

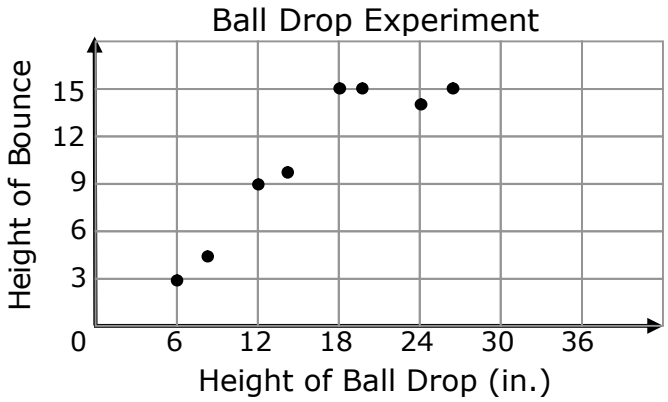
   • How many more team members ran 1.1 miles and 2.2 miles than ran 1.4, 1.8, or 2.6 miles? _____

NAME_____ DATE_____ SCORE ___/10

## 5.1B Skills and Concepts 7

### 5.9B

1. A fifth grade science team conducted a ball drop experiment. They made a scatterplot to represent the height of the ball when it was dropped and the height of the first bounce of the ball.




Does the ordered pair (3, 6) represent a point on the scatterplot? _____
Explain how you know your answer is correct.

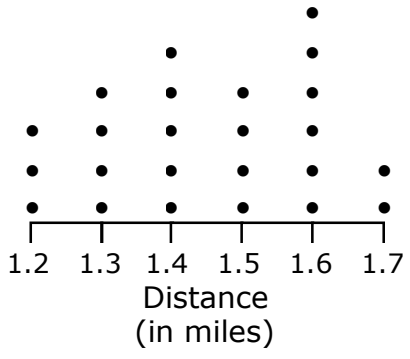
Does the ordered pair (6, 3) represent a point on the scatterplot? _____
Explain how you know your answer is correct.

Does the ordered pair (10, 15) represent a point on the scatterplot? _____
Explain how you know your answer is correct.

Does the ordered pair (12, 21) represent a point on the scatterplot? _____
Explain how you know your answer is correct.

### 5.9C

2. Felecia recorded the distance she walked around the school track on different days. Then she created a dot plot to represent the data.



- Record the difference between the least number and the greatest number of miles she walked.

_____ – _____ = _____

Explain how you know your answer is correct.

- Record the number of days she walked 1.2, 1.3, or 1.4 miles.

_____ + _____ + _____ = _____

Explain how you know your answer is correct.

**5.10F**

3. The Monroe family monthly income is $2,950. Their monthly expenses for September are shown below.

| Monroe Family Expenses for September | |
|---|---|
| Rent | $1,250 |
| Utilities | $244 |
| Food | $560 |
| School Supplies | $250 |
| Car Expenses | $185 |

What is the maximum amount the Monroe family can save in the month of September? Show your work to find the answer.

Explain how you know your answer is correct.

**5.10A**

4. Tracy works in Texas, so she does not pay state income tax. She earns $625 each week. Each week she pays $39.57 in other taxes. Her final pay is $437.4 each week. Find the amount she pays in federal income taxes each week. Show your work.

Explain how you know your answer is correct.

**5.10B**

5. Teresa's gross monthly income is $1,250. Her total monthly payroll taxes are $175.63. What is the amount of Teresa's net monthly income? Show your work.

Teresa's net monthly income is $_____. Explain why your answer is correct.

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# GRADE 5

# Open-Ended Skills and Concepts

## TEKS CATEGORY 2

## Number and Operations

NAME_____ DATE_____ SCORE ___/10

## 5.3K Skills and Concepts 1

1. A school choir made $675.26 at a bake sale fund raiser. They spent $195.15 of the money on stage decorations for a spring concert. How much money from the bake sale is left? Show your work to find the answer.

   Explain how you know your answer is correct.

2. The 2000 estimated population of the Republic of Chile, a country in South America, was 14,995,500. The Republic of Columbia, also a country in South America, had a 2000 estimated population of 38,324,400. What is the difference between the 2000 estimated populations of the two countries? Show your work to find the answer.

   Explain how you know your answer is correct.

3. Gerard had $\frac{7}{8}$ quart of chocolate milk. He drank $\frac{1}{4}$ quart of the chocolate milk. How much chocolate milk is left? Show your work to find the answer.

   Explain how you know your answer is correct.

4. Johanna completed 3 forward twists in 2.86 seconds on the floor exercise in gymnastics competition. Lana completed 3 forward twists in 2.5 seconds. How many seconds longer did Johanna stay in the air than Lana? Show your work to find the answer.

   Explain how you know your answer is correct.

5. Natalie swam $8\frac{2}{3}$ lengths of the city pool during swim class. Marcus swam 10.5 lengths during class. How many more lengths of the pool did Marcus swim than Natalie? Show your work to find the answer.

   Explain how you know your answer is correct.

NAME_____ DATE_____ SCORE ___/10

## 5.3K Skills and Concepts 2

1. Olivia had $\frac{9}{10}$ meter of decorative trim. She cut off $\frac{3}{5}$ meter of the trim to use on a jewelry box she is making. How much trim does Olivia have left? Show your work to find the answer.

   Explain how you know your answer is correct.

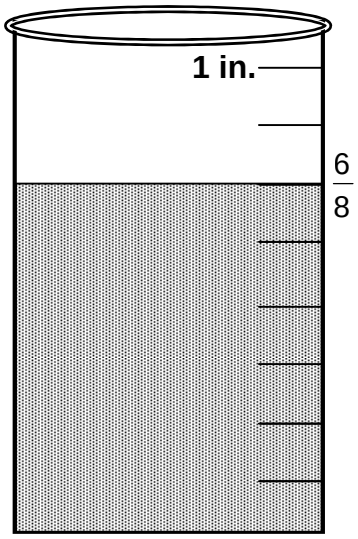
2. Analisa spent $\frac{1}{8}$ of her allowance to buy watercolor paper and $0.75$ of her allowance to buy watercolor paints. What part of her allowance did Analisa spend on the paper and paints? Show your work to find the answer.

   Explain how you know your answer is correct.

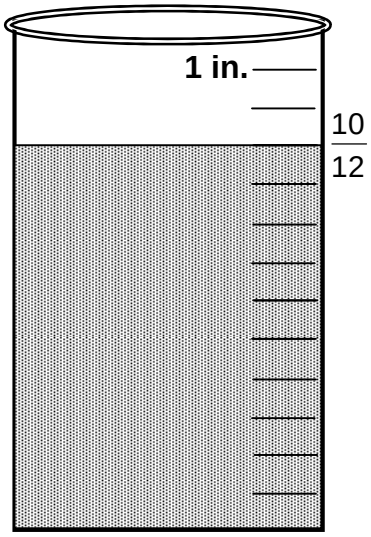
3. The distance from Fiona's house to an amusement park is 11.85 miles. Fiona and her family have driven 9.10 miles so far. What is the distance they have left to travel before they reach the amusement park? Show your work to find the answer.

   Explain how you know your answer is correct.

4. Jerome and Evelyn are weather watchers. Each of them uses a rain gauge to measure rainfall amounts to report to a local radio station. The drawing below shows the amount of rain water in each rain gauge after a rainstorm.




Jerome's Rain Gauge




Evelyn's Rain Gauge

What is the difference between the amount of rain water in Jerome's rain gauge and the amount in Evelyn's rain gauge? Show your work to find the answer.

Explain how you know your answer is correct.

5. Lorena had $718.54 in her checking account. She deposited an additional $50.25 into her account. How much will she have left in her account after she spends $147.29 to pay her electric bill? Show your work to find the answer.

Explain how you know your answer is correct.

NAME_____ DATE_____ SCORE ___/10

## 5.3K Skills and Concepts 3

1. Mr. Sierra has $805.62 in his checking account. How much does he have after he spends $137.84 on groceries? Show your work to find the answer.

   Explain how you know your answer is correct.

2. Mitch and his sister collect aluminum cans for recycling. Mitch has 435 cans, and his sister has 376. How many more cans do they need to collect in order to reach their goal of 900 cans? Show your work to find the answer.

   Explain how you know your answer is correct.

3. Benji used $\frac{3}{10}$ of a package of notebook paper to write his science fair report.

   He used $\frac{2}{5}$ of the same package of notebook paper to write his history fair report.

   How much of the package of notebook paper did Benji use to write the two reports? Show your work to find the answer.

   Explain how you know your answer is correct.

4. Jane went to the animal shelter to adopt a kitten. When she brought the kitten home it weighed 3.95 kilograms. The kitten gained 1.5 kilograms in the first month and 1.75 kilograms in the second month. What was the kitten's weight at the end of the second month? Show your work to find the answer.

   Explain how you know your answer is correct.

5. Teri received $\frac{3}{4}$ of the votes for most valuable player on the soccer team. Miguel received $\frac{1}{5}$ of the votes. What fraction of the votes were for a player other than Teri or Miguel? Show your work to find the answer.

   Explain how you know your answer is correct.

NAME_____ DATE_____ SCORE ___/10

## 5.3K Skills and Concepts 4

1. Trisha jogged around the school track $5\frac{1}{3}$ times during PE class. Sunjay jogged around the same track $7\frac{1}{6}$ times. How many more times did Sunjay jog around the track than Trisha? Show your work to find the answer.

   Explain how you know your answer is correct.

2. Lecretia measured the distance from her classroom to the library. She measured 52.25 meters to the end of the hall, then she measured another 32.85 meters from the end of the hall to the library. What is the distance from Lecretia's classroom to the library? Show your work to find the answer.

   Explain how you know your answer is correct.

3. Janie is cutting lengths of fabric for a decorating project. One length of fabric is $3\frac{2}{3}$ yards long, and a second length of fabric is 8 yards long. How much longer is the second length of fabric than the first length of fabric? Show your work to find the answer.

Explain how you know your answer is correct.

4. Priscilla used color tiles to make $\frac{1}{8}$ of a design red and $\frac{2}{3}$ of the design yellow. She made the rest of the design green. How much of the design did Priscilla make red and yellow? Show your work to find the answer.

Explain how you know your answer is correct.

5. Serena had a beginning monthly balance of $926.94 in her savings account. How much money will she have left after she withdraws $149.57? Show your work to find the answer.

Explain how you know your answer is correct.

TEKSING TOWARD STAAR

MATHEMATICS ®

# GRADE 5

# Open-Ended Skills and Concepts

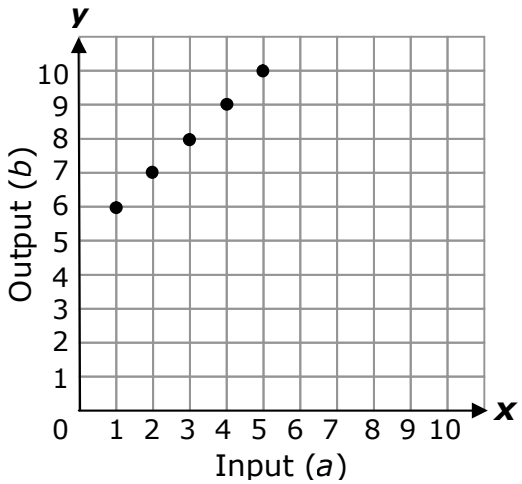
## TEKS CATEGORY 3

## Algebraic Reasoning

NAME_____ DATE_____ SCORE ___/10

## 5.4D Skills and Concepts 1

1. There is a pattern in the graph below.




What rule describes the pattern on the graph? _____
Describe how you used the pattern in the graph to find the rule.

2. The pattern in the table below is described by a rule.

| Input | ***v*** | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|
| Output | ***w*** | 21 | 24 | 27 | 30 |

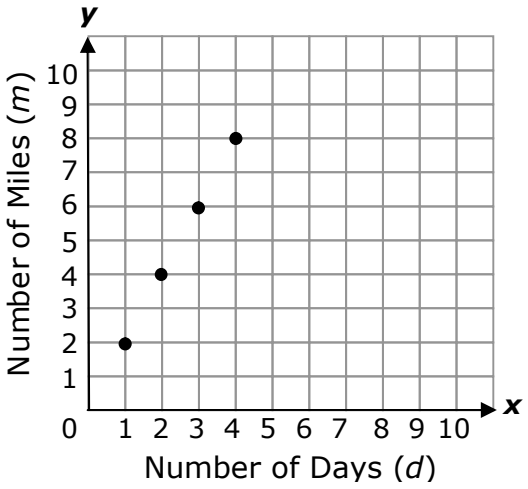
What rule describes the pattern? _____
Describe how you used the pattern in the table to find the rule.

3. The pattern in the table below is described by a rule.

| Input | ***c*** | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Output | ***d*** | 11 | 12 | 13 | 14 |

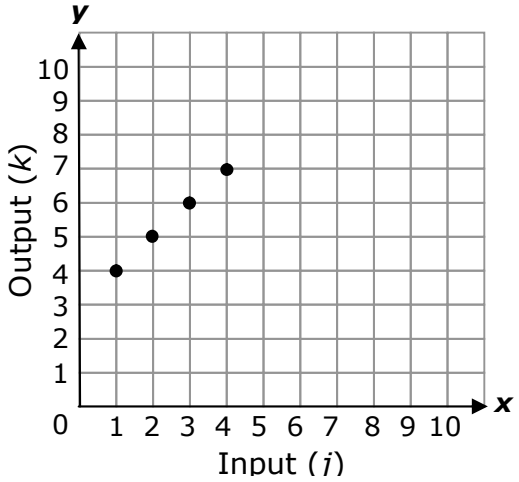
What rule describes the pattern? _____
Describe how you used the pattern in the table to find the rule.

4. The graph shows the relationship between the number of days, *d*, and the number of miles, *m*, Deanna rode her bicycle.




What rule describes the pattern on the graph? _____
Describe how you used the pattern in the graph to find the rule.

5. The pattern in the graph represents the relationship between input, *j*, and output, *k*.




What rule describes the pattern on the graph? _____ = _____ + _____
Describe how you used the pattern in the graph to find the rule.

NAME_____ DATE_____ SCORE ___/10

## 5.4D Skills and Concepts 2

1. Katerina made the table below.

| Input | ***x*** | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|
| Output | ***y*** | 20 | 24 | 28 | 32 |

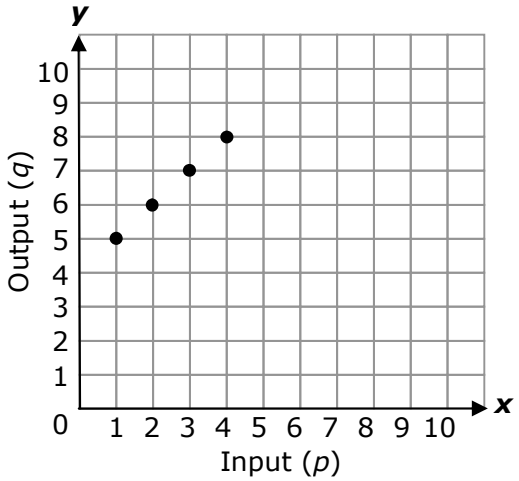
What rule describes the pattern? _____
Describe how you used the pattern in the table to find the rule.

2. Julian made the table below.

| Input | ***x*** | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Output | ***y*** | 9 | 10 | 11 | 12 |

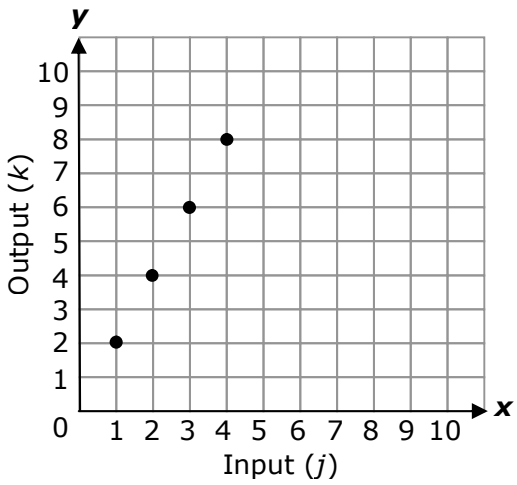
What rule describes the pattern? _____
Describe how you used the pattern in the table to find the rule.

3. The pattern in the graph represents the relationship between input, $p$, and output, $q$.




What rule describes the pattern on the graph? _____
Describe how you used the pattern in the graph to find the rule.

4. The pattern in the graph represents the relationship between input, $j$, and output, $k$.




What rule describes the pattern on the graph? _____
Describe how you used the pattern in the graph to find the rule.

5. Mr. Thomas is a roofer who puts shingles on buildings. The table represents the relationship between the number of hours, $h$, and the number of shingle squares, s, he puts on a roof. The pattern in the table can be described by a rule.

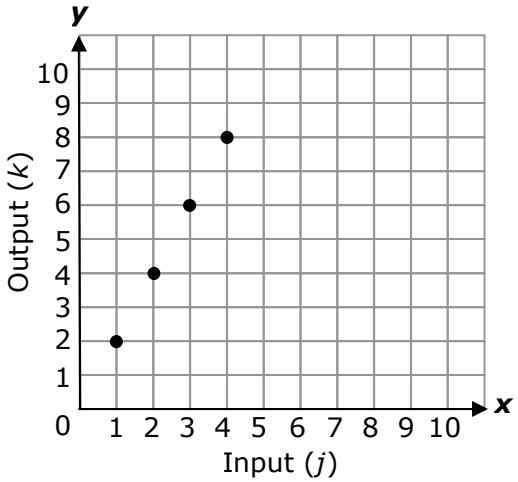
| Number of Hours, $h$ | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Number of Squares, $s$ | 5 | 7.5 | 10 | 12.5 |

What rule describes the pattern? _____
Describe how you used the pattern in the table to find the rule.

NAME_____ DATE_____ SCORE ___/10

## 5.4D Skills and Concepts 3

1. The pattern in the graph represents the relationship between input, *j*, and output, *k*.



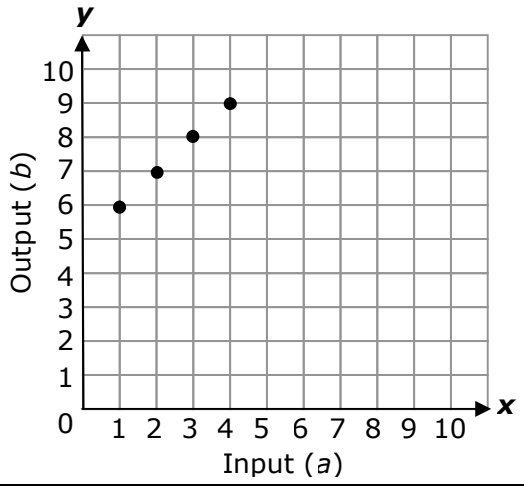

What rule describes the pattern on the graph? _____
Describe how you used the pattern in the graph to find the rule.

2. The table represents a pattern.

| Input | ***v*** | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|
| Output | ***w*** | 21 | 24 | 27 | 30 |

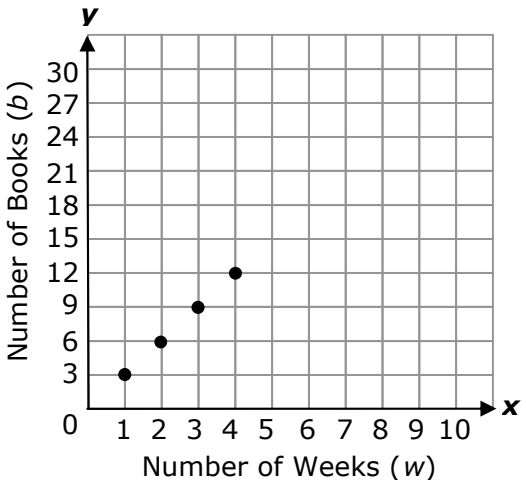
What rule describes the pattern? _____
Describe how you used the pattern in the table to find the rule.

3. The pattern in the graph represents the relationship between input, *a*, and output, *b*.



What rule describes the pattern on the graph? _____
Describe how you used the pattern in the graph to find the rule.

4. The graph shows the relationship between the number of weeks, *w*, and the number of books, *b*, Griselda read for a reading contest.




What rule describes the pattern on the graph? _____
Describe how you used the pattern in the graph to find the rule.

5. Reggie made a table to represent a pattern.

| Input | ***x*** | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|
| Output | ***y*** | 20 | 24 | 28 | 32 |

What rule describes the pattern? _____
Describe how you used the pattern in the table to find the rule.

NAME_____ DATE_____ SCORE ___/10

## 5.4D Skills and Concepts 4

1. Mr. Jeter is a photographer. The table represents the relationship between the number of hours, *h*, and the number of packages of pictures, *p*, he can process. The pattern in the table can be described by a rule.

| Number of Hours, *h* | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| Number of Packages, *p* | 12 | 16 | 20 | 24 |

What rule describes the pattern? _____
Describe how you used the pattern in the table to find the rule.

2. Nathan's mother plans to make muffins for a school party. The table below represents the relationship between the number of boxes of cake mix, *b*, and the number of dozen muffins, *m*, she can make. The pattern in the table can be described by a rule.

| Number of Boxes, *b* | Number of Dozen Muffins, *m* |
|---|---|
| 2 | 3 |
| 3 | 4.5 |
| 4 | 6 |
| 5 | 7.5 |

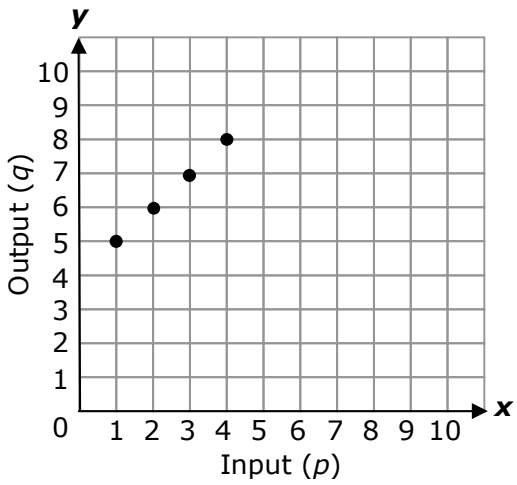
What rule describes the pattern? _____
Describe how you used the pattern in the table to find the rule.

3. Lu created this table to represent a pattern.

| Input | ***x*** | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Output | ***y*** | 9 | 10 | 11 | 12 |

Describe how you used the pattern in the table to find the rule.

4. The pattern in the graph represents the relationship between input, $p$, and output, $q$.




What rule describes the pattern on the graph? _____
Describe how you used the pattern in the graph to find the rule.

5. Trevor created this table to represent a pattern.

| Input | ***c*** | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Output | ***d*** | 11 | 12 | 13 | 14 |

What rule describes the pattern? _____
Describe how you used the pattern in the table to find the rule.

TEKSING TOWARD STAAR

MATHEMATICS®

# GRADE 5

# Open-Ended Skills and Concepts

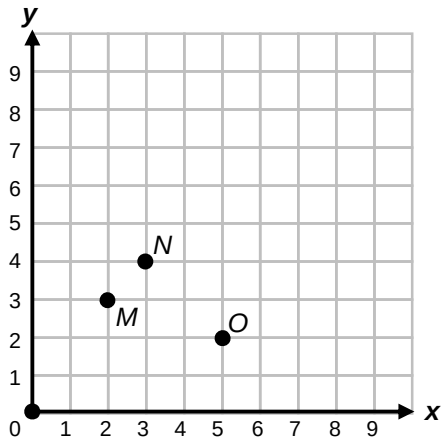
## TEKS CATEGORY 4

## Geometry and Measurement

NAME_____ DATE_____ SCORE ___/10

## 5.8B Skills and Concepts 1

1. Which point is located at (5, 2)?




- From the origin, point *M* is located _____ units to the right and _____ units up.

  The ordered pair for point *M* is (_____, _____).

- From the origin, point *N* is located _____ units to the right and _____ units up.

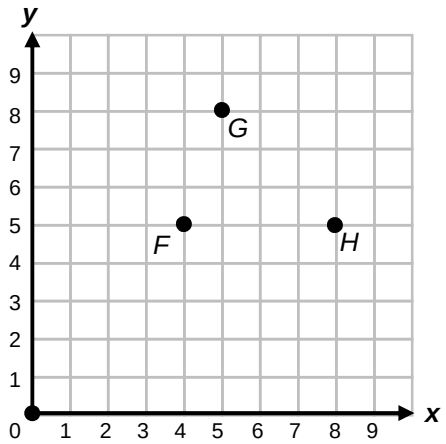
  The ordered pair for point *N* is (_____, _____).

- From the origin, point *O* is located _____ units to the right and _____ units up.

  The ordered pair for point *0* is (_____, _____).

So, point _____ is located at (5, 2).

2. Which point is located at (8, 5)?




- From the origin, point *F* is located _____ units to the right and _____ units up.

  The ordered pair for point *F* is (_____, _____).

- From the origin, point *G* is located _____ units to the right and _____ units up.

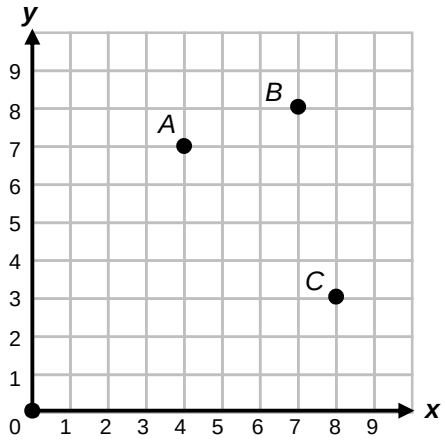
  The ordered pair for point *G* is (_____, _____).

- From the origin, point *H* is located _____ units to the right and _____ units up.

  The ordered pair for point *H* is (_____, _____).

So, point _____ is located at (8, 5).

3. What ordered pair describes the location of points *A, B,* and *C*?




- Point *A* is _____ units to the right of and _____ units above the origin.

  The ordered pair for point *A* is ( _____ , _____ ).

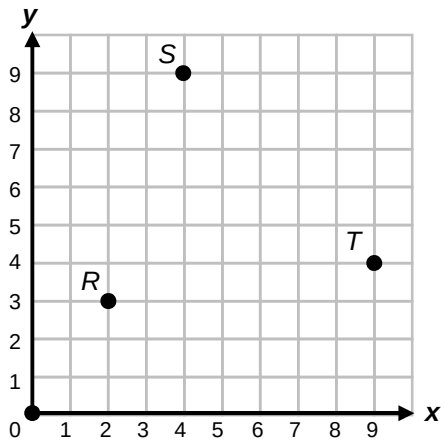
- Point *B* is _____ units to the right of and _____ units above the origin.

  The ordered pair for point *B* is ( _____ , _____ ).

- Point *C* is _____ units to the right of and _____ units above the origin.

  The ordered pair for point *C* is ( _____ , _____ ).

4. What ordered pair describes the location of points *R, S,* and *T*?




- Point *R* is _____ units to the right of and _____ units above the origin.

  The ordered pair for point *R* is ( _____ , _____ ).

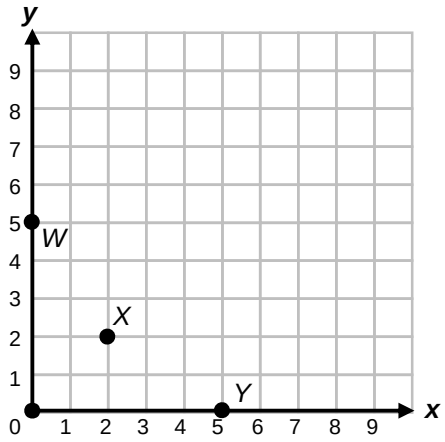
- Point *S* is _____ units to the right of and _____ units above the origin.

The ordered pair for point *S* is ( _____ , _____ ).

- Point *T* is _____ units to the right of and _____ units above the origin.

  The ordered pair for point *T* is ( _____ , _____ ).

5. Which point is located at (0, 5)?




- From the origin, point *W* is located _____ units to the right and _____ units up.

  The ordered pair for point *W* is (_____, _____).

- From the origin, point *X* is located _____ units to the right and _____ units up.

  The ordered pair for point *X* is (_____, _____).

- From the origin, point *Y* is located _____ units to the right and _____ units up.

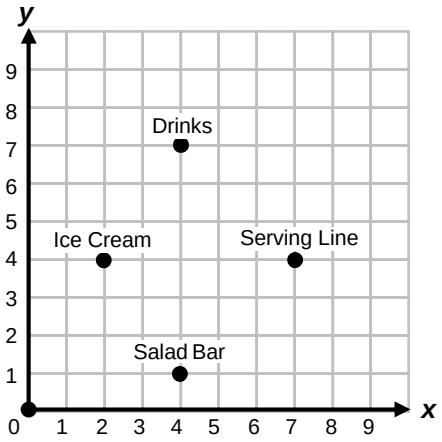
  The ordered pair for point *Y* is (_____, _____).

So, point _____ is located at (0, 5).

NAME_____ DATE_____ SCORE ___/10

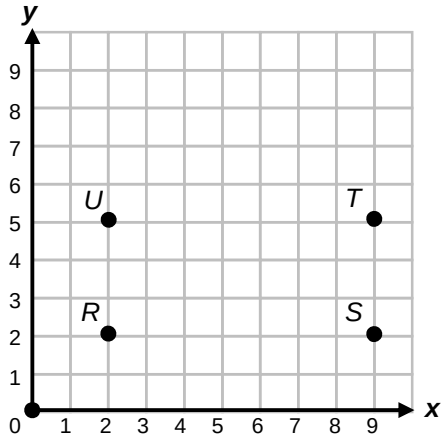
## 5.8B Skills and Concepts 2

1. Some areas of a school cafeteria are represented on the grid.




- What ordered pair describes the location of the serving line? ( _____, _____ )
- What ordered pair describes the location of the drinks? ( _____, _____ )
- What ordered pair describes the location of the salad bar? ( _____, _____ )
- What ordered pair describes the location of the ice cream? ( _____, _____ )

2. What ordered pair describes the location of points *R, S, T* and *U*?




- Point *R* is _____ units to the right of and _____ units above the origin.

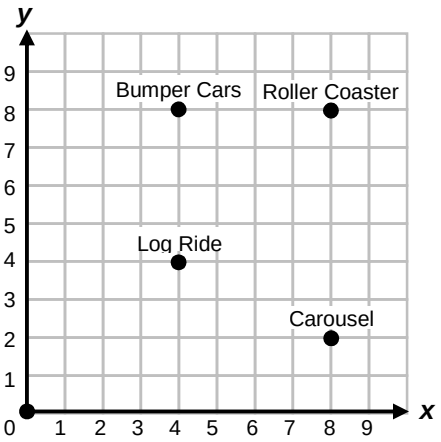
  The ordered pair for point *R* is ( _____ , _____ ).
- Point *S* is _____ units to the right of and _____ units above the origin.

  The ordered pair for point *S* is ( _____ , _____ ).
- Point *T* is _____ units to the right of and _____ units above the origin.

  The ordered pair for point *T* is ( _____ , _____ ).
- Point *U* is _____ units to the right of and _____ units above the origin.

  The ordered pair for point *U* is ( _____ , _____ ).

3. Some areas of an amusement park are represented on the grid.

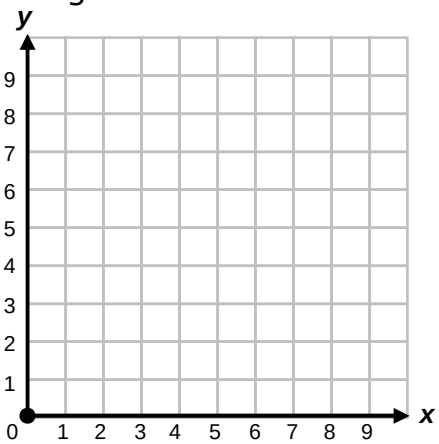



- What ordered pair describes the location of the roller coaster? ( _____, _____ )
- What ordered pair describes the location of the carousel? ( _____, _____ )
- What ordered pair describes the location of the bumper cars? ( _____, _____ )
- What ordered pair describes the location of the log ride? ( _____, _____ )
- Explain how you found the ordered pair for the roller coaster.

4. The coordinates of 3 points are shown.

| Point | *x* | *y* |
|---|---|---|
| *A* | 2 | 4 |
| *B* | 4 | 6 |
| *C* | 6 | 8 |

Plot the points on the coordinate grid.

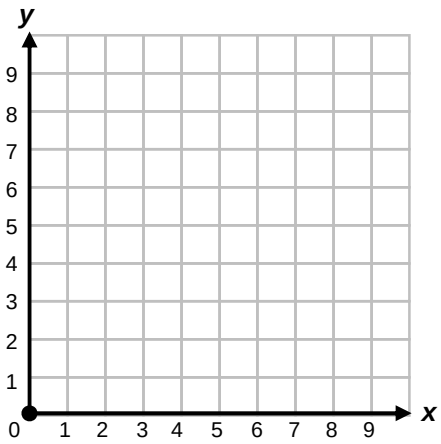



Explain how you decided to plot the location of Point *B*.

5. The coordinates of 3 points are shown.

| Point | *x* | *y* |
|---|---|---|
| *M* | 1 | 6 |
| *N* | 5 | 8 |
| *O* | 9 | 7 |

Plot the points on the coordinate grid.

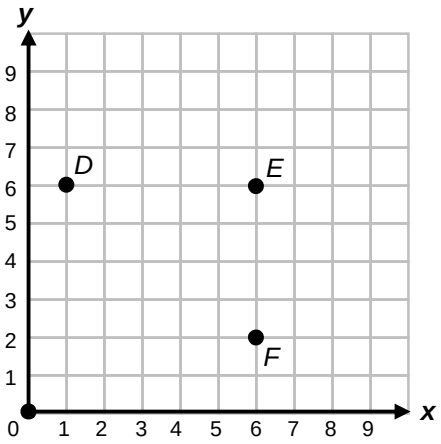



Explain how you decided to plot the location of Point *N*.

NAME_____ DATE_____ SCORE ___/10

## 5.8B Skills and Concepts 3

1. Which point is located at (6, 2)?




- From the origin, point *D* is located _____ units to the right and _____ units _____.

  The ordered pair for point *D* is (_____, _____).

- From the origin, point *E* is located _____ units to the _____ and _____ units up.

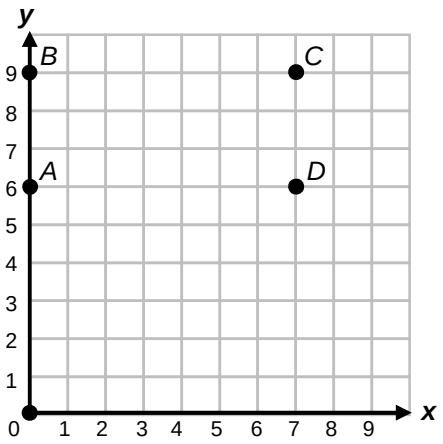
  The ordered pair for point *E* is (_____, _____).

- From the origin, point *F* is located _____ units to the right and _____ units _____.

  The ordered pair for point *F* is (_____, _____).

So, point _____ is located at (6, 2).

2. What ordered pair describes the location of points *A, B, C,* and *D*?




- Point *A* is _____ units to the _____ of and _____ units _____ the origin.

  The ordered pair for point *A* is ( _____ , _____ ).

- Point *B* is _____ units to the _____ of and _____ units _____ the origin.

The ordered pair for point *B* is ( _____ , _____ ).

- Point *C* is _____ units to the _____ of and _____ units _____ the origin.

  The ordered pair for point *C* is ( _____ , _____ ).

- Point *D* is _____ units to the _____ of and _____ units _____ the origin.

  The ordered pair for point *D* is ( _____ , _____ ).

3. Point *Z* is 7 units to the right and 1 unit up from the origin.
   - What ordered pair describes point *Z*? ( _____, _____ )
   - Explain how you know the ordered pair is correct.

4. Is the ordered pair (6, 2) the same as the ordered pair (2, 6)? _____
   - Explain how you know your answer is correct.

5. The instructions for plotting a point in a coordinate grid read "Start at the origin. Move right 8 units, then up 7 units."

   What is the ordered pair that describes the location of the point? ( _____, _____ )
   Explain how you know your answer is correct.

NAME_____ DATE_____ SCORE ___/10

## 5.8B Skills and Concepts 4

1. Angelina used a number pattern to graph a point on a coordinate plane. She graphed the coordinate pair (3, 5). Complete the following to make true statements about the point she graphed.

   _____ is the distance of the point from 0 on the vertical number line.

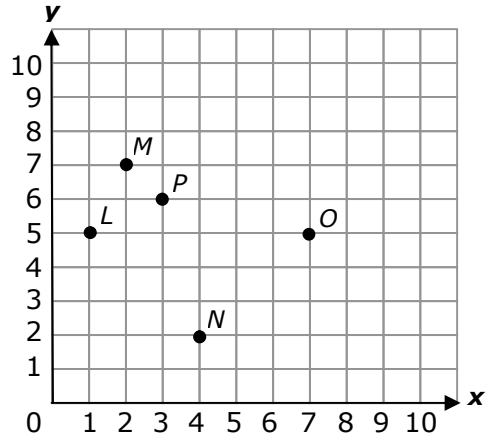
   _____ is the distance of the point from 0 on the horizontal number line.

   _____ is the input value from the pattern.

   _____ is the output value from the pattern.

   Explain how you know the statements are true.

2. Jaylyn plotted a point on the coordinate plane that is 3 units to the right and 6 units up from the origin.




   Which point on the coordinate plane did she plot? _____
   Explain how you know your answer is correct.

3. Noah plotted a point on a coordinate plane to represent the ordered pair (2, 9). Complete the following to describe how he located this point on the coordinate plane.

   Move _____ units to the _____ of the _____ and then

   _____ units _____. Explain how you know your description is correct.

4. Marcie plotted a point on a coordinate plane to represent the ordered pair (4, 6). Complete the following to describe how to locate this point on the coordinate plane.

   Move _____ units to the _____ of the _____ and then

   _____ units _____. Explain how you know your description is correct.

5. Jon plotted a point on a coordinate plane to represent the ordered pair (2, 1). Complete the following to describe how to locate this point on the coordinate plane.

   Move _____ units to the _____ of the _____ and then

   _____ units _____. Explain how you know your description is correct.

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MATHEMATICS ®

# GRADE 5

# Open-Ended Skills and Concepts

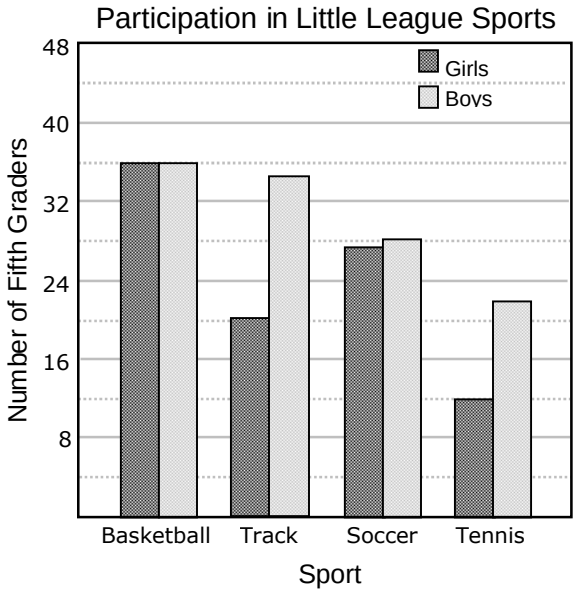
## TEKS CATEGORY 5

## Data Analysis

NAME_____ DATE_____ SCORE ___/10

## 5.9C Skills and Concepts 1

1. This double bar graph shows the number of fifth grade boys and girls participating on several sports teams in the Texastown Little League.




**Answer each question below. Record evidence to support your answer. An example of supporting evidence is shown after question 1.**

**Question 1:** How many more boys than girls participate on the track team?

**Supporting Evidence:** The bar representing the number of girls participating on the track team is at _____ and the bar representing the number of boys participating on the track team is at _____.

_____ - _____ = _____

The difference between the two numbers is _____, therefore _____ more boys than girls participate on the track team.

**Question 2:** What is the difference between the total number of girls playing sports and the total number of boys playing sports at Bush Middle School? Show your work.

**Supporting Evidence:**

**Question 3:** Which sport has the greatest difference in the number of girls or boys that participate on the teams? Show your work.

**Supporting Evidence:**

2. An amusement park asked fifth grade students to vote on their favorite ride at the park. The data was recorded in a frequency table.

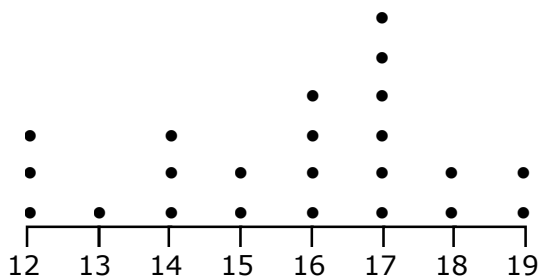
| Favorite Ride | |
|---|---|
| Ride | Frequency |
| Lazy River | 11 |
| The Wave | 19 |
| Tower Slide | 17 |
| Log Ride | 23 |
| Cave Slide | 17 |
| Roaring Rapids | 17 |

- What is the difference between the frequency of votes for the log ride and the lazy river? _____ Explain how you know your answer is correct.

- Which rides received an equal number of votes? _____

- What is the number of students that voted for Cave Slide and Roaring Rapids combined? _____ Explain how you know your answer is correct.

3. Jeffrey and his family took a long vacation to a national park. Jeffrey created a dot plot to represent the number of times a geyser erupted each day during the 23 days they stayed at the national park.




- Record the difference between the least number and the greatest number of times the geyser erupted in a day.

_____ – _____ = _____

So, the difference between the least number and the greatest number of times the geyser erupted in a day is _____.

- Record the total number of days the geyser erupted 12, 14 or 16 times.

_____ + _____ + _____ = _____

So, the total number of days the geyser erupted 12, 14 or 16 times is _____.

- Record the number of days the geyser erupted 1 or 2 times.

_____ + _____ + _____ = _____

So, the total number of days the geyser erupted 1 or 2 times is _____.

- Record the difference between the total number of days the geyser erupted an even number of times and the total number of days the geyser erupted an odd number of times.

_____ – _____ = _____

So, the total number of days the geyser erupted an even number of times and the total number of days the geyser erupted an odd number of times is _____. Explain how you know your answer is correct.

4. Coach Beesley had fifth grade students sign up to compete in their favorite event for field day.

| Fifth Grade Field Day Events | |
|---|---|
| Events | Frequency |
| Baseball throw | 12 |
| Spoon and egg relay race | 52 |
| Water balloon toss | 62 |
| Tow sack relay race | 26 |
| Obstacle course | 13 |

- Which event did half as many students sign up for as the spoon and egg relay race? _____ Explain how you know your answer is correct.

- Which events combined did fewer students sign up for than the tow sack relay race? _____ and _____ Explain how you know your answer is correct.

- Which events combined did fewer students sign up for than water balloon toss? _____ and _____

5. Kendrick measured and recorded the height of ten of his cousins to the nearest inch. He created a stem-and-leaf plot to represent the data.

Height (in.)

| Stem | Leaves | | | |
|---|---|---|---|---|
| 4 | 5 | 7 | | |
| 5 | 0 | 2 | 3 | 6 |
| 6 | 0 | 6 | 8 | 9 |

Key: 4 | 5 represents 45 in.

What is the range of the heights of Kendrick's cousins? _____

Explain how you know your answer is correct.

NAME_____ DATE_____ SCORE ___/10

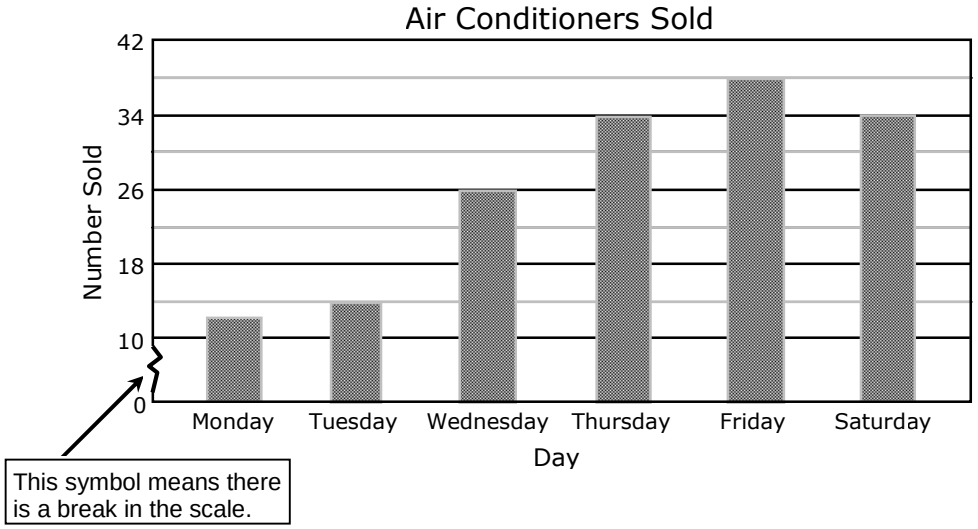
## 5.9C Skills and Concepts 2

1. High temperatures caused the number of sales of window air conditioner units to increase at a local hardware store. The table below shows the number of window air conditioners sold during _____ days.

Air Conditioner Sales

| Day | Number of Air Conditioners Sold |
|---|---|
| Monday | 12 |
| Tuesday | 14 |
| Wednesday | 26 |
| Thursday | 34 |
| Friday | 38 |
| Saturday | 34 |

- The first column in the table represents the _____ of the _____.
- The second column represents the _____ of _____ _____ _____.
- The second data row shows the hardware store sold _____ air conditioners on _____.
- The fifth data row shows the hardware store sold _____ air conditioners on _____.
- This bar graph shows the _____ of air conditioners sold during _____ days.




- The broken line on the _____-axis indicates that the values between 0 and ____ are not included.
- The height of the bars can be used to compare the _____ of window air conditioners sold each day during _____ days.

• **Answer each question below. Record evidence to support your answer.**

**Question 1:** How much did the number of air conditioners sold between Monday and Tuesday increase?

**Supporting Evidence:**

**Question 2:** Between which two days did the number of air conditioners sold not increase?

**Supporting Evidence**

**Question 3:** Which day was the greatest number of air conditioners sold?

**Supporting Evidence**

2. Jason surveyed fifth grade students about the country they would most like to visit. He created a frequency table to show the data from his survey.

| Countries to Visit | |
|---|---|
| Country | Frequency |
| Canada | 16 |
| China | 23 |
| Iceland | 7 |
| England | 8 |
| Italy | 19 |

• Which two countries do the greatest number of students want to visit? _____
Explain how you know your answer is correct.

- Students will write a report on the country they chose. How many students will write a report on the two countries the greatest number of students want to visit?

  _____ Explain how you know your answer is correct.

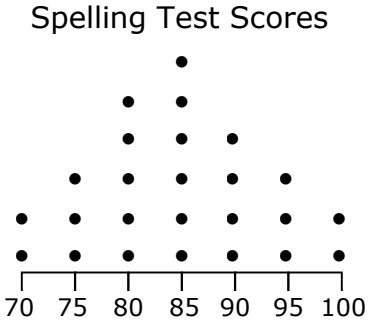
- Which two countries do the least number of students want to visit?

  Explain how you know your answer is correct.

- How many students will write a report on the two countries the least number of students want to visit?

  _____ Explain how you know your answer is correct.

3. Mr. Garza recorded the spelling scores for his class on a data table, then he created a dot plot to represent the data.




- Record the difference between the lowest score and the highest score on the test.

  _____ – _____ = _____

  So, the difference between the lowest score and the highest score on the test is _____.

  Explain how you know your answer is correct.

- Record the number of students who scored 70-80 on the test.

  _____ + _____ + _____ = _____

  So, the number of students who scored 70-80 on the test is _____.

  Explain how you know your answer is correct.

- Record the number of students who scored 85-95 on the test.

_____ + _____ + _____ = _____

So, the number of students who scored 85-95 on the test is _____.

Explain how you know your answer is correct.

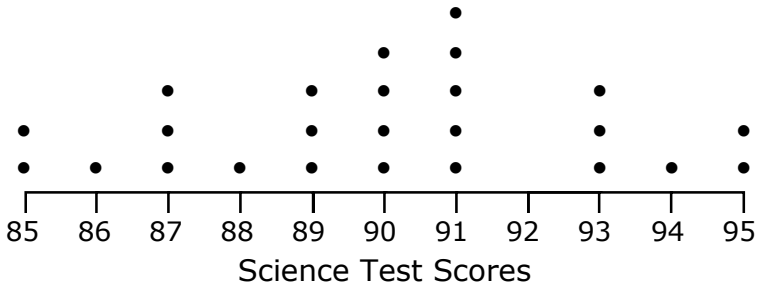
- Record the difference between the number of students who scored 85-95 and the number of students who scored 70-80.

_____ – _____ = _____

So, the difference between the number of students who scored 85-95 and the number of students who scored 70-80 is _____.

Explain how you know your answer is correct.

4. The dot plot represents the test scores for a fifth grade science class.




What is the range of scores on the science test? _____

Explain how you know your answer is correct.

5. Clarissa created a stem-and-leaf plot to represent the distance she rode her new bicycle each week for 11 weeks. She decided to find the total number of miles she rode her bicycle during the weeks she rode more than 40 miles. Next month she plans to ride her bicycle twice as many miles as that total.

Distance (miles)

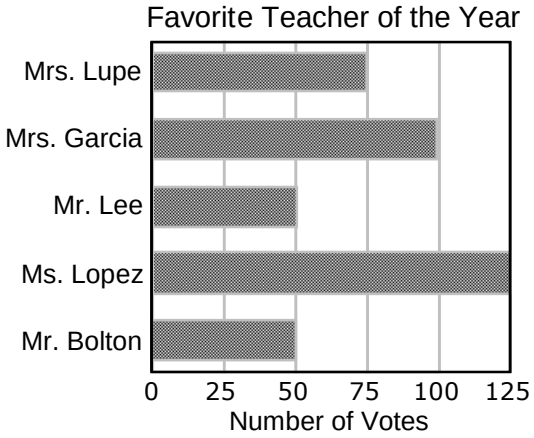
| Stem | Leaves |
|---|---|
| 2 | 3 5 8 |
| 3 | 1 2 3 4 6 |
| 4 | 1 4 9 |
| Key: 2 | 0 represents 20 mi |

What is the number of miles Clarissa plans to ride her bicycle next month? _____
Explain how you know your answer is correct.

NAME_____ DATE_____ SCORE ___/10

## 5.9C Skills and Concepts 3

1. Houston Elementary honors a teacher each year as "Favorite Teacher of the Year". The students vote for this award. This year the votes were counted and the data was represented on a graph.




- How many students voted for the "Favorite Teacher " award? _____
  My answer is correct because:

- How many more students voted for Mrs. Garcia than for Mrs. Lupe? _____
  My answer is correct because:

- Which teachers received the same number of votes? _____ and
  _____ My answer is correct because:

2. Emily asked people in her town how many miles they live from the closest gas station. She recorded her data in a frequency table.

| Distance to Gas Station | |
|---|---|
| Distance (in miles) | Number of People |
| 1.2 | 32 |
| 1.8 | 20 |
| 2.1 | 41 |
| 2.4 | 18 |
| 3.7 | 13 |
| 4.1 | 9 |

- How many people did Emily ask about the number of miles they live from the closest gas station? _____ Explain how you know your answer is correct.

- How many people live less than 2 miles from the closest gas station? _____
  Show your work.

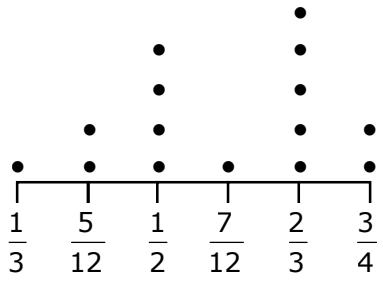
- How many people live more than 2 miles from the closest gas station? _____
  Show your work.

- How many people live 1.8 and 3.7 miles from the closest gas station? _____
  Show your work.

- How many people live less than 2.4 miles from the closest gas station? _____
  Show your work.

- How many people drive more than 8 miles from home to the closest gas station and back home? _____ Show your work.

3. Carla recorded the time she spent practicing her piano lessons. The dot plot represents the number of times she practiced different amounts of time.




Time Spent Practicing
(in hours)

- Record the difference between the least amount of time and the greatest amount of time Carla practiced.

  _____ – _____ = _____

  So, the difference between the least amount of time and the greatest amount of time is _____ hour.

  Explain how you know your answer is correct.

- Record the number times Carla practiced $\frac{1}{2}$ hour or less.

  _____ + _____ + _____ = _____

So, the number of times Carla practiced $\frac{1}{2}$ hour or less is _____.

Explain how you know your answer is correct.

- Record the number of times Carla practiced $\frac{1}{2}$ hour or greater.

_____ + _____ + _____ = _____

So, the number of times Carla practiced $\frac{1}{2}$ hour or greater is _____.

Explain how you know your answer is correct.

- Record the difference between the number of times Carla practiced less than $\frac{1}{2}$ hour and the number of times she practiced greater than $\frac{1}{2}$ hour.

_____ – _____ = _____

So, the difference between the number of times Carla practiced less than $\frac{1}{2}$ hour and the number of times she practiced greater than $\frac{1}{2}$ hour is _____.

4. Veronica measured and recorded the heights of the tomato plants in her vegetable garden. She measured heights to the nearest whole inch. Then she created a stem-and-leaf plot to represent the data.

Heights of Tomato Plants

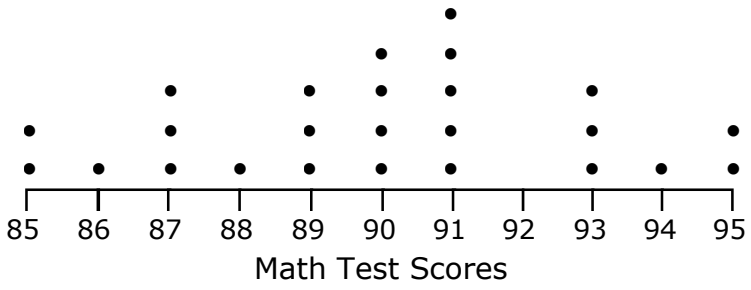
| Stem | Leaves |
|---|---|
| 1 | 1 3 8 |
| 2 | 1 3 4 5 6 |
| 3 | 0 6 |
| Key: 1 | 1 represents 11 in. |

Veronica bought a $2 plant stake for each tomato plant that is taller than 25 inches.

What amount did she spend on plant stakes? _____

Explain how you know your answer is correct.

5. Mrs. Martinez made a dot plot to represent the six weeks math test scores for the students in her class.

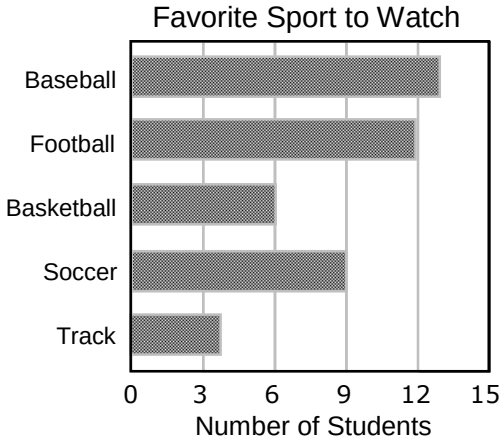



How many more students received a score of 90 or less than received a score greater than 90? _____ Explain how you know your answer is correct.

NAME_____ DATE_____ SCORE ___/10

## 5.9C Skills and Concepts 4

1. Students listed their "Favorite Sport to Watch" as a class project in speech class. They could list only one sport. The information they gave is shown on the graph below.




- How many students listed a "Favorite Sport " to watch? _____
  Explain how you used the graph to find your answer.

- How many more chose baseball than chose soccer?_____
  Explain how you used the graph to find your answer.

- Were any two sports chosen by the same number of students?_____
  Explain how you used the graph to find your answer.

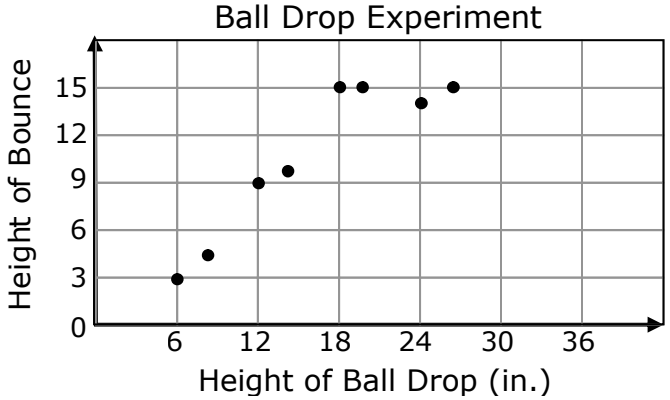
2. The members a cross country track team are practicing for a meet. They practice running through the woods. The team coach recorded the distances they ran, then he made a frequency table to show the data.

| Distance Ran During Practice | |
|---|---|
| Distance (in miles) | Number of Team Members |
| 1.1 | 8 |
| 1.4 | 4 |
| 1.8 | 11 |
| 2.2 | 9 |
| 2.6 | 3 |

- How many team members ran more than 2 miles during practice? _____
- How many team members ran during practice? _____

- How many more team members ran 1.1 miles and 2.2 miles than ran 1.4, 1.8, or 2.6 miles? _____

3. A fifth grade science team conducted a ball drop experiment. They created a scatterplot to represent the height of the ball when it was dropped and the height of the first bounce of the ball.




Complete the following to describe data on the scatterplot the science team made.

When the height the ball bounces is _____, the height the ball was dropped from is _____.

Explain how you know the statements describes the data.

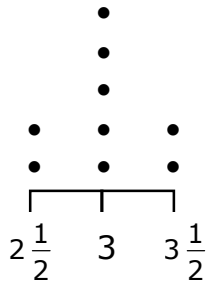
4. A school librarian created a stem-and-leaf plot to represent the number of books read by fifth grade students during a reading contest. Students who read more than 25 and less than 35 books were given a $5 gift card to a book store. Students who read 35 books or more were given a $10 gift card to a book store.

Reading Contest Data

| Stem | Leaf | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3 | 4 | 4 | 6 | 9 | | | | |
| 2 | 1 | 1 | 2 | 3 | 4 | 6 | 7 | 8 | 8 |
| 3 | 0 | 2 | 2 | 4 | 5 | 7 | | | |
| 4 | 1 | 2 | 3 | | | | | | |
| Key: 1 | 3 represents 13 books | | | | | | | | |

What is the total value of the gift cards given to fifth grade students? _____
Explain how you know your answer is correct.

5. The dot plot below represents the different amounts of whole wheat flour a baker mixed into the loaves of bread she made on Thursday.




Whole Wheat Flour

What is the total amount of whole wheat flour she used to make all of the loaves of bread? _____ Explain how you know your answer is correct.

TEKSING TOWARD STAAR

MATHEMATICS®

# GRADE 5

# Open-Ended Skills and Concepts

## TEKS CATEGORY 6

## Personal Financial Literacy

NAME_____ DATE_____ SCORE ___/10

## 5.10E Skills and Concepts 1

1. Dora's budget for the month of May is shown below.

May Budget

| Income | Expense |
|---|---|
| Allowance: $25 | Cell Phone: $18 |
| Babysitting: $20 | Movie Rentals: $12 |
| | Books: $20 |

In June, Dora plans to get a new cell phone plan that costs $30 per month. She can increase her income from babysitting to $25 per month. She would like to continue renting movies and buying books. What are two different things Dora can do to keep a balanced budget?

2. Serena's expenses are greater than her income. What must Serena increase to be able to balance her budget?

3. The Lee family's monthly income is $3,200. They budget $1,100 for rent, $725 for food, $400 for utilities, $375 for transportation, $300 for savings, $200 for education, and $250 for miscellaneous expenses. What are two different things the Lee family can do to balance their budget?

4. Cole made a budget for May.

May Budget

| Income | Expense |
|---|---|
| Allowance: $36 | Entertainment: $12 |
| Yard work: $10 | Savings: $20 |
| | New swim trunks: $18 |

What are two different things Cole can do to balance his budget?

5. Reese made a budget to keep track of her money for April.

April Budget

| Income | Expense |
|---|---|
| Allowance: $28 | Stationery: $9 |
| Tutoring: $18 | Savings: $15 |
| | Photography Supplies: $27 |

What are two different things Reese can do to balance her budget?

NAME_____ DATE_____ SCORE ___/10

## 5.10E Skills and Concepts 2

1. Angelina's net income is $28,000 per year. She would like to have a balanced budget. If her other expenses are three-fourths as much as her income, how much can she save each year? Show your work on notebook paper to find the answer.

   Explain how you know your answer is correct.

2. Tatiana's budget for the month of April is shown below.

April Budget

| Income | Expense |
|---|---|
| Allowance: $40 | Meals with friends : $35 |
| House cleaning: $25 | Acting class: $15 |
| | Sports equipment: $25 |

   Tatiana would like to buy soccer shoes that are on sale for $30. She will use her sports equipment budget for part of the cost. What can Tatiana do to have a balanced budget?

3. Xavier earned $50 each day for five days this week. His weekly expenses are $280. How can he balance his budget?

4. Eliza's budget for the month of February is shown below.

February Budget

| Income | Expense |
|---|---|
| Allowance: $40 | Meals with friends : $35 |
| House cleaning: $25 | Acting class: $15 |
| | Sports equipment: $25 |

   What changes can Eliza make to balance her budget?

5. Darwin works at a grocery store sacking groceries. He earns $12 per hour after taxes and works 24 hours each week. His weekly expenses total $324. How many more hours would Darwin need to work to balance his budget? Show your work on notebook paper to find the answer.

   Explain how you know your answer is correct.