



ALPHA PLUS

TEACHER'S GUIDE

Math 5



SUCCESS **OAS**
with

Oklahoma Academic Standards

TEACHER'S GUIDE

SUCCESS **OAS**
with

Math 5

Ensuring Student Success *with* Oklahoma Academic Standards

Written by Oklahoma Teachers for Oklahoma Teachers

Shannon Stewart



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SUCCESS *with* OAS



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FOREWORD

Adopted in 2016 by the State Board of Education, the Oklahoma Academic Standards (OAS) mathematics objectives are measurably more rigorous in content and different in terms of vertical alignment than previous curriculum frameworks.

Immediately, Alpha Plus Educational Systems sought highly qualified teachers to develop a teaching and learning resource specifically aligned to the new standards. CEO Jan Barrick also enlisted my help and that of Dr. Frank Wang, President of the Oklahoma School of Science and Mathematics (OSSM), who is a nationally known, accomplished mathematics educator and an experienced textbook publisher. It has been my pleasure to help ensure the content is of high quality and will provide a solid mathematical foundation.

Written by Oklahoma teachers for Oklahoma teachers, the *Success with OAS: Alpha Plus Mathematics* series provides a robust set of resources relating mathematical skills to the real world of Oklahoma students.

-- Edna McDuffie Manning, *EdD.*, *Mathematics*
Founder and President Emerita, Oklahoma School of Science and Mathematics

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INTRODUCTION

The *Success with OAS: Alpha Plus Mathematics* framework for instruction, independent student work, and continuous review will prepare students for comprehensive assessments at each grade level. Following is a summary addressing the most effective way to use each element.

Teacher's Guide

Objective Statement: At the beginning of each lesson, the OAS objective is stated as adopted. This is helpful when writing lesson plans and understanding the focus of the lesson.

Real-World Connections: Students must be engaged and must relate the concept to their daily lives. Connecting to a real-world application taps into students' prior knowledge and shows the practicality behind the concept. It is suggested that the teacher start with a relevant, age-appropriate game, class discussion, website or video, role-play, or other group activity. This will illustrate the need to learn the skill so that students can use it in their daily lives.

Vocabulary: A list of vocabulary words critical to each OAS Objective is provided, particularly those used in the state's *Test and Item Specifications*. A complete vocabulary definition can be found in the student workbook and in the comprehensive Glossary at the end of the book.

Modeling: The Modeling section provides step-by-step instructions for one or more ways to teach the objective and the skills related to the lesson. Teachers may use this to direct students and add more examples or details as needed for the teachers' lesson plans.

Extension Activities: This is a list of possible resources to enhance the objective lesson. Every author provided links to tools they use in class, to online content available at no charge for teacher use, and to other lesson-planning resources.

Answer Key: Every Teacher's Guide includes a complete Answer Key for each assessment item in the student workbook. The Answer Key for the Continuous Review designates what objectives are assessed.

Comprehensive Examination: A Comprehensive Examination was developed to resemble the state assessment and encompasses every objective taught. It can be used as a pre-test and post-test for the school year to better prepare students for state-mandated tests. The Answer Key provides the answers with objective numbers.

Student Workbook

Objective Statement: At the beginning of each student lesson is the objective statement. It clearly defines the focus of the lesson.

Real-World Connections: Written in age-appropriate language, this section reminds students of prior knowledge they have on the topic and how they might use this skill in their daily lives. Relevance is essential to student engagement in the lesson. Teachers can highlight this scenario for the students with a game, role-play, or other group activity.

Vocabulary: Each lesson includes a vocabulary list with definitions for the words the students will encounter on state assessments. Students should also learn to use the Glossary in the back of the book.

Guided Practice: Every objective lesson includes a Guided Practice, which is a set of items available for use in class as part of, or after, instruction. The ten practice problems reflect every skill students will use when they work independently.

Independent Practice: The Independent Practice is a series of twenty questions and activities the student may do independently, either in the classroom or for homework. The Independent Practice can also be used for reinforcement or review as needed.

Continuous Review: At the end of each lesson, there is a Continuous Review with ten questions covering objectives taught previously in the book or aligned to key skills from previous grade level(s). The Answer Key designates the objective each question assesses. The Continuous Review is in sequence after each objective lesson or can be used as a weekly assessment to reinforce past skills.

OAS Mathematics
Table of Contents
5th grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
1	5.N.1.1	Estimate solutions to division problems in order to assess the reasonableness of results.	1	1
2	5.N.1.2	Divide multi-digit numbers, by one- and two-digit divisors, using efficient and generalizable procedures, based on knowledge of place value, including standard algorithms.	13	8
3	5.N.1.3	Recognize that quotients can be represented in a variety of ways, including a whole number with a remainder, a fraction or mixed number, or a decimal and consider the context in which a problem is situated to select and interpret the most useful form of the quotient for the solution.	27	17
4	5.N.1.4	Solve real-world and mathematical problems requiring addition, subtraction, multiplication, and division of multi-digit whole numbers. Use various strategies, including the inverse relationships between operations, the use of technology, and the context of the problem to assess the reasonableness of results.	42	27
5	5.A.1.1	Use tables and rules of up to two operations to describe patterns of change and make predictions and generalizations about real-world and mathematical problems.	57	38
6	5.A.1.2	Use a rule or table to represent ordered pairs of whole numbers and graph these ordered pairs on a coordinate plane, identifying	77	50

OAS Mathematics
Table of Contents
5th grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
7		the origin and axis in relation to coordinates.		
	5.A.2.1	Generate equivalent numerical expressions and solve problems involving whole numbers by applying the commutative, associative, and distributive properties and order of operations (no exponents).	96	62
8	5.A.2.2	Determine whether an equation or inequality involving a variable is true or false for a given value of the variable.	113	73
9	5.A.2.3	Evaluate expressions involving variables when values for the variables are given.	130	84
10	5.N.2.1	Represent decimal fractions (e.g., $\frac{1}{10}$, $\frac{1}{100}$) using a variety of models (e.g., 10 by 10 grids, rational number wheel, base ten blocks, meter stick) and make connections between fractions and decimals.	143	92
11	5.N.2.2	Represent, read, and write decimals using place value to describe decimal numbers including fractional numbers as small as thousandths, and whole numbers as large as millions.	162	105
12	5.N.2.3	Compare and order fractions and decimals, including mixed numbers and fractions less than one, and locate on a number line.	177	115
13	5.N.2.4	Recognize and generate equivalent decimals, fractions, mixed numbers, and fractions less than one in various contexts.	195	128

OAS Mathematics
Table of Contents
5th grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
14	5.N.3.1	Partition (fair share) sets of objects into equal groupings.	213	139
15	5.N.3.2	Illustrate that the length of an object is the number of same-size units of length that, when laid end-to-end with no gaps or overlaps, reach from one end of the object to the other.	231	151
16	5.N.3.3	Measure the same object/distance with units of two different lengths and describe how and why the measurements differ.	256	166
17	5.N.3.4	Use nonstandard and standard measuring tools to measure the length of objects to reinforce the continuous nature of linear measurement.	276	179
18	5.GM.1.1	Describe a length to the nearest whole unit using a number and a unit.	288	188
19	5.GM.1.2	Describe and classify three-dimensional figures including cubes, rectangular prisms, and pyramids by the number of edges, faces, or vertices as well as the shapes of faces.	307	201
20	5.GM.1.3	Recognize and draw a net for a three-dimensional figure (e.g., cubes, rectangular prisms, pyramids).	320	209
21	5.GM.2.1	Recognize that the volume of rectangular prisms can be determined by the number of cubes (n) and by the product of the dimensions of the prism ($a \times b \times c = n$). Know that the rectangle prisms of different dimensions (p , q , and r) can have	343	221

OAS Mathematics
Table of Contents
5th grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
		the same volume if $a \times b \times c = p \times q \times r = n$.		
22	5.GM.2.2	Recognize that the surface area of a three-dimensional figure with rectangular faces with whole numbered edges can be found by finding the area of each component of the net of that figure. Know that three-dimensional shapes of different dimensions can have the same surface area.	363	235
23	5.GM.2.3	Find the perimeter of polygons and create arguments for reasonable values for the perimeter of shapes that include curves.	383	250
24	5.GM.3.1	Measure and compare angles according to size.	402	264
25	5.GM.3.2	Choose an appropriate instrument and measure the length of an object to the nearest whole centimeter of 1/16-inch.	420	278
26	5.GM.3.3	Recognize and use the relationship between inches, feet, and yards to measure and compare objects.	443	295
27	5.GM.3.4	Recognize and use the relationship between millimeter, centimeters, and meters to measure and compare objects.	458	306
28	5.D.1.1	Find the measure of central tendency (mean, median, or mode) and range of a set of data. Understand that the mean is a “leveling out” or central balance point of the data.	476	319

OAS Mathematics
Table of Contents
5th grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
29	5.D.1.2	Create and analyze line and double-bar graphs with whole number, fraction, and decimal increments.	497	333

5.A.1.1 Use tables and rules of up to two operations to describe patterns of change and make predictions and generalizations about real-world and mathematical problems.

Real-World Connections

Have you ever been asked to help your mom or grandma in the garden? If so, you may have been asked to help plant flowers or food. When you plant items in a garden, you usually plant them in a particular pattern. Patterns are used in your everyday lives. Patterns can be seen in grocery store displays, car dealerships, and in clothing stores. Patterns help in making predictions, such as in sports or weather.

Vocabulary

table	mathematical information organized in columns and rows
rule	an algebraic expression that fits a set of numbers
two-step operation	an equation that takes two steps to solve
pattern	a sequence or arrangement with some rule that determines the next term in the sequence
prediction	a reasonable guess as to what will happen
generalization	a statement that is true in most situations
mathematical problem	the study of numbers, quantities, shapes and space using mathematical processes, rules and symbols
algebraic expression	a group of numbers, symbols, and variables that express an operation or a series of operations
variable	a symbol, usually a letter, that stands for a quantity that varies; may also be a picture or box
T-chart	a chart in the shape of a “T” that shows the relationship between two sets of data

Every pattern will have a rule that will help you know what comes next.

Hints to solving patterns

1. If the numbers in your pattern get higher, you are either adding or multiplying. Both addition and multiplication increase a number.
2. If the numbers in your pattern get smaller, you are either subtracting or dividing. Both subtraction and division decrease a number.

Example:

What are the next 4 numbers in this pattern?

2, 5, 8, 11, _____, _____, _____, _____

Step 1: Find the rule for the pattern.

Is the pattern increasing or decreasing?

Step 2: You should have said increasing. Can you add or multiply anything to 2 to get 5? Yes, you can add 3.

Step 3: What happens when you add $5 + 3$? You get 8. What about adding $8 + 3$? You get 11. You have discovered your pattern, adding 3.

Step 4: Complete the pattern by adding 3 to your answer. (14, 17, 20, 23)

Example:

Patterns with two operations

3, 6, 5, 10, 9, _____, _____

Step 1: Find the rule for the pattern.

Is the pattern increasing or decreasing?

Step 2: You should have said both; you know this pattern involves two operations. What can you multiply or add to 3 to get 6? You could add 3 or multiply 2.

Step 3: Try multiplying 2. What operation can be performed to go from 6 to 5? Subtract 1. Try the pattern of multiplying 2 and subtracting 1 to see if it works in your sequence.

What are your missing numbers in the sequence? _____ , _____

Guided Practice (5.A.1.1)

Name: _____

For questions 1-6, identify the pattern or relationship within each sequence and find the missing number(s).

1. 3, 6, 9, ____, 15, 18, ____ What is the pattern? _____
 What are the missing numbers? _____ & _____

2.

Month	1	2	3	4
Blue-Ray	4	8	—	16

What is the pattern? _____ What is the missing number? _____

3. Grandma’s flower garden has 6 flowers in the front row, 10 flowers in the second row, 14 flowers in the third row, and 18 flowers in the fourth row. If the pattern continues how many flowers would be in the next 3 rows?

Answer: _____, _____, _____ What is the pattern? _____

4. What are the next 2 numbers in this sequence?

25, 30, 28, 33, 31, _____, _____

Answer: _____, _____, What is the pattern? _____

5. What is the rule for going from column A to column B? _____

A	B
3	6
6	9

6. What are the next 3 numbers in this sequence?

2, 3, 5, 8, 12, 17, _____, _____, _____

Answer: _____, _____, _____ What is the pattern? _____

Guided Practice (5.A.1.1)

Name: _____

For questions 7-10, identify the pattern or relationship within each sequence and find the missing number(s).

7.



IN	OUT
1	6
3	8
5	10
7	12
9	14

Rule: _____

8.



IN	OUT
1	1
2	3
3	5
4	7
5	9

Rule: _____

9.



IN	OUT
3	1
6	4
9	7
12	10
15	13

Rule: _____

10.



IN	OUT
2	1
4	3
6	5
8	7
10	9

Rule: _____

5.A.1.1 Use tables and rules of up to two operations to describe patterns of change and make predictions and generalizations about real-world and mathematical problems.

For questions 1-4, identify the pattern or relationship within each sequence.

1. What is the rule for going from column X to column Y? _____

<u>X</u>	<u>Y</u>
3	18
4	24
5	30
6	36
7	42
8	48

2. What pair of numbers would complete this table?

- A 6 and 10
- B 7 and 14
- C 8 and 16
- D 10 and 15

1	8
3	10
5	12
?	?

3. Write a pattern for the variable expression $x + 3$. Use at least 4 numbers for your pattern.

4. Write a pattern for the variable expression $y \cdot 5$. Use at least 4 numbers for you pattern. _____

Based on the pattern of the players in the chart make your predictions

5.

Player	Field Goals	Turnovers	Free Throws
Susan	125	19	86
Tina	100	?	93
Kelly	75	9	?
Shelly	?	4	107

- How many field goals would Shelly score? _____
What is the pattern? _____

- How many turnovers would Tina have? _____
What is the pattern? _____

- How many free throws would Kelly make? _____
What is the pattern? _____

6. Identify the rule for the pattern from the following set of numbers.

10, 30, 20, 60, 50, 150, 140

Rule: _____

7. Identify the rule for the pattern from the following set of numbers.

200, 20, 2

Rule: _____

8. Identify the rule for the pattern from the following set of numbers.

10, 14, 11, 15, 12, 16, 13

Rule: _____

Independent Practice (5.A.1.1)

Name: _____

Find the missing number from the patterns below and state the rule.

9. Identify the missing number from the pattern below.

6, 30, 150, _____, 3, 750

Missing Number: _____

Rule: _____

10. Identify the missing numbers from the pattern below.

20, 80, 60, _____, 220, _____

Missing Numbers: _____, _____ Rule: _____

For questions 11-14, identify the pattern or relationship within each sequence.

11.



IN	OUT
2	8
4	14
6	20
8	26
10	32

Rule: _____

12.



IN	OUT
5	45
6	54
7	63
8	72
9	81

Rule: _____

13. The school secretary recorded the number of pencils sold in the office before school and at noon each day. The results are shown in the table below.

Number of Pencils Sold		
Day	Before School	Noon
Monday	12	23
Tuesday	13	24
Wednesday	9	20
Thursday	16	27
Friday	21	32

Which conclusion best describes the number of pencils sold in the office before school compared to the number of pencils sold at noon?

- A The number of pencils sold at noon each day was 12 less than the number of pencils sold before school each day.
- B The number of pencils sold at noon each day was 12 more than the number of pencils sold before school each day.
- C The number of pencils sold at noon each day was 11 less than the number of pencils sold before school each day.
- D The number of pencils sold at noon each day was 11 more than the number of pencils sold before school each day.

14. The librarian recorded the number of books sold at a book fair before and after school each day. The results are shown in the table below.

Number of Books Sold		
Day	Before School	After School
Monday	24	15
Tuesday	23	14
Wednesday	19	10
Thursday	13	4
Friday	28	19

Which conclusion best describes the number of books sold at the book fair after school compared to the books sold before school each day?

- A The number of books sold after school each day was 9 more than the number of books sold before school each day.
- B The number of books sold after school each day was 9 less than the number of books sold before school each day.
- C The number of books sold after school each day was 8 more than the number of books sold before school each day.
- D The number of books sold after school each day was 8 less than the number of books sold before school each day.

Independent Practice (5.A.1.1)

Name: _____

*Complete the pattern in the t-chart with the stated rule.*15. Rule: $3x + 1$

In(x)	Out
2	
3	
4	
5	

16. Rule: $x + 5$

In(x)	Out
3	
5	
7	
9	

17. Rule: $2x \div 6$

In(x)	Out
6	
12	
18	
24	

18. Rule: $2x - 1$

In(x)	Out
8	
9	
11	
12	

19. Rule: $12x$

In(x)	Out
3	
6	
9	
12	

20. Rule: $100 \div x$

In(x)	Out
2	
4	
5	
10	

For questions 1-4, divide by estimating to the greatest place value.

1. Case is a high school basketball player who spends approximately 21 hours a week practicing. If Case practices 7 days per week, on average how many hours per day does Case practice?
2. A farmer wants to plant 121 rows of corn. If he plants 12 plants in each row, how many rows will he need to make?
3. A town needs to buy 280 hamburger buns for its big 4th of July celebration. The hamburger buns come in packages of 14. About how many packages should the town buy?
4. A farmer needs to ship 751 watermelons to the grocery store. If each crate can hold 19 watermelons, about how many crates will the farmer need?

Continuous Review (5.A.1.1)

Name: _____

Answer questions 5-6 by solving for the quotient. The answers will have a remainder, so you need to decide how to answer each question using a whole number.

5. Carter needs 962 blocks to build a race track for his cars. If each box contains 47 blocks, how many boxes should he buy?

6. The cafeteria wants to buy 287 new trays. If each box contains 12 trays, how many boxes should the cafeteria buy?

Answer questions 7-8 by dividing decimals.

7. $55.44 \div 14 =$

8. $36.3 \div 11 =$

Answer questions 9-10 by using inverse operations.

9. $7 + x = 36$

10. $x \div 8 = 2$

A

acute angle: any angle measuring less than 90°

addition: process of combining two or more addends together to find the total or the sum (+)

algebraic expression: a mathematical phrase that has no equal sign

algorithm: a finite set of steps for completing a procedure

angles: formed by two rays with a common endpoint, called a vertex

area models: models using area to show multiplication

associative property: addition and multiplication; EX: $(a + b) + c = a + (b + c)$

axis: a real or imaginary reference line

B

bar graph: a graph that compares data from several situations using vertical or horizontal bars

base 10 blocks: blocks which show base-10 number values

C

centimeter: unit of length equal to one hundredth of a meter (0.01)

central tendency: refers to the average of a data set; includes mean, median, mode and range

commutative property: addition and multiplication, numbers may be added or multiplied together in any order EX: $a + b = b + a$

compare: tell how two or more things are alike

congruent: same size, same shape

convert: means to change to make different

coordinate plane: a plane in which a point is represented using two coordinates that determine the precise location of the point

coordinates: written as ordered pairs of numbers and letters and numbers

cube: the regular solid of six equal square sides

D

data: collection of information

decimal: a number system based on 10, also known as the Base-10 system which uses 10 digits to show all numbers... 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

degrees: To measure angles, it is convenient to mark degrees on the circumference of a circle. Thus, a complete revolution is 360° , half a revolution is 180° , a quarter of a revolution is 90° and so forth. The sum of any triangle equals 180° .

denominator: the bottom number of a fraction that tells how many equal parts are in a whole

difference: the result when one number is subtracted from another

dimensions: measurable size of something; often refers to length, width, and height

distributive property: when multiplying a number is the same as multiplying its addends by the number, then adding the products. EX: $2 \cdot (6 + 4) = (2 \cdot 6) + (2 \cdot 4)$

dividend: the number being divided in a division problem

division: sharing or grouping a number to equal parts (\div)

divisor: the number you are dividing by in a division problem

double bar graph: is a graph showing pairs of bars that represent two types of related data.

E

edges: the side of a polygon or a line segment where two faces of a solid figure meet

equation: number sentence that uses the equal sign

equiangular: equal angles

equilateral triangle: a triangle with 3 equal sides and 3 equal angles

equivalent decimals: decimals that name the same amount

equivalent fractions: fractions that name the same amount

equivalent numerical expression: obtained from using the properties of operations

estimate: to make an appropriate calculation, often based on rounding

evaluate: to find the value of an algebraic expression

expression: mathematical phrase that combines operations, numbers, and/or variables

F

faces: flat surfaces of a 3-D shape

feet: a unit of length equal to $\frac{1}{3}$ of a yard or 12 inches

fraction: a number that expresses parts of a whole or a set

G

generalization: a statement that is true in most situations

graph: a visual diagram used to represent statistical information or functions and equations

greatest common factor (GCF): the greatest factor that two or more numbers have in common

H

histogram: a type of bar graph that displays data using intervals

horizontal: going side-to-side, like the horizon

hundredths: one part of 100 equal parts

I

improper fraction: a fraction in which the numerator is greater than or equal to the denominator

inches: a unit of length equal to $\frac{1}{12}$ of a foot

inequality: occurs when things are not equal

inverse operation: the operation that reverses the effect of another operation

inverse relationship: an operation that reverses the effect of another operation

integers: a set of whole numbers including positives, negatives, and zero

isosceles triangle: a triangle with two sides and two equal angles

L

least common denominator (LCD): the least common multiple of two or more denominators

least common multiple (LCM): the least number other than zero that is a multiple of two or more given numbers

length: the distance from one end to the other

less: relationship of one number being smaller than another number

like fractions: fractions that have the same denominators

line graph: way to display data that changes over time

M

mathematical problem: the study of numbers, quantities, shapes, and space using mathematical processes, rules, and symbols

mean: average of the numbers in a data set; add up all the numbers, then divide by how many numbers there are

measure: standard units to find the size or quantity of an object; examples include finding height, area, weight, temperature or time

measurement: finding size or quantity; examples: length, height, area, weight, temperature and time

median: middle value when the data is in numerical order

meter: basic unit of length in the metric system

metric system: a system of measurement based on tens. The basic unit of capacity is the liter. The basic unit of length is the meter. The basic unit of mass is the gram.

millimeter: unit of length equal to one thousandth of a meter (0.001)

mixed number: a number written as a whole number and a proper fraction EX: $1\frac{1}{2}$

mode: value or values that occur most often

model: a mathematical representation (e.g., number, graph, matrix, equation(s), geometric figure) for real-world mathematical objects, properties, actions or relationships

more: relationship of one number being larger than another number

multiplies: a number is that number multiplied by an integer

multiplication: mathematical operation where a number is added to itself a number of times

N

net: a two-dimensional representation of a 3-D figure constructed of polygons

number line: a line in which numbers are marked at intervals

numerator: the top number of a fraction that tells how many parts of a whole are being considered

O

obtuse angles: any angle measuring greater than 90°

$\frac{1}{16}$ **inch:** base between two whole numbers on a base 16 ruler

operations: general term for any one of addition, subtraction, multiplication, or division

order of operations: the order in which you answer a math problem

order: the arrangement of a set group of objects

ordered pairs: two sets of numbers that list a location on a coordinate plane

origin: on a two-dimensional graph it is where the X axis and Y axis cross, marked (0, 0) on the graph

outlier: a value that is extremely larger or smaller than other values within a data set

P

pattern: a sequence or arrangement with some rule that determines next term in the sequence

PEDMAS: an acronym for the word parenthesis, exponents, multiplication, division, addition and subtraction. Given two or more operations in a single expression, the order the letters in PEMDAS tells you what order to calculate the expression.

perimeter: total length of all the edges of a polygon, or the distance around a polygon

place value: the value given to the place in which a digit appears in a number

point: an exact location; it has no size, only position

polygon: closed, 2-D figure comprised of line segments connected end-to-end, and such that no two segments cross each other

prediction: a reasonable guess as to what will happen

prism: a solid figure that has two congruent and parallel faces

product: result of two numbers being multiplied

protractor: an instrument for measuring angles, typically in the form of a flat semicircle marked with degrees along the curved edge

pyramid: 3-D shape constructed from a polygon base and triangular sides that all meet at a common vertex

Q

quadrant: any of the 4 areas made when we divide up a plane by an x and y axis;.they are usually numbered I, II, III and IV

quotient: the answer to a division problem

R

range: difference between the least and greatest values in set

rational number wheel: a number expressible in the form $\frac{a}{b}$ or $-$; the rational number includes the integers

rectangular prism: 3-D object constructed that has six faces that are all rectangles; opposite faces are both equal and parallel

remainder: the amount left over after dividing a number

right angles: any angle measuring exactly 90° , one quarter of a full revolution

right triangle: a triangle with one right angle

rule: an algebraic expression that fits a set of numbers

S

scalene triangle: a triangle in which all three sides are a different length

shape: an outward form or shape of an object

simplest form: the answers always reduced to the lowest form

solid figures: 3-dimensional figures with length, width, and height, creating an interior

solution: the answer to a problem

standard of customary system: a measuring system that uses inches, feet, yards, miles, ounces, pounds, tons, cups, pints, quarts, and gallons

straight angle: a straight angle changes the direction to point the opposite way; looks like a straight line; measures 180° (half a revolution, or two right angles)

subtraction: process of finding the difference between two numbers (-)

sum: total amount when two or more numbers are added together

surface area: total amount of the area of the faces of a rectangular prism; equivalently, the total area of a net for the prism

T

t-chart: a chart in the shape of a “T” that shows the relationship between two sets of data

table: mathematical information organized in columns and rows

technology: scientific method or invention

tenths: one part of 10 equal parts

thousandths: one part of 1,000 equal parts

three-dimensional figures (3D): shapes having three dimensions of length, width, and height

triangle: a polygon with three sides

two-step operation: an equation that takes two steps to solve

V

value: the numerical worth or amount

variable: a symbol used to represent a quantity that can vary, or change; usually a letter but may also be a picture or box

vertex: a point at which three or more edges meet

vertical: in an up-down direction or position; upright.

volume: number of cubic units needed to fill a space

W

whole numbers: the numbers 0,1,2,3, etc....

Y

yards: a unit of length equal to 3 feet