



ALPHA PLUS

Math 3



SUCCESS *with* **OAS**

Oklahoma Academic Standards

TEACHER'S GUIDE

SUCCESS **OAS**
with

Math 3

Ensuring Student Success *with* Oklahoma Academic Standards

Written by Oklahoma Teachers for Oklahoma Teachers

Cassidy Cline



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SUCCESS *with* OAS



Cassidy Cline is a 2004 graduate of the University of Oklahoma with a degree in Elementary Education. She has been teaching for 12 years and is in her ninth year of teaching third grade. She currently teaches in Washington, Oklahoma.

Melody Atteberry

*B.A. Special Education, M.A. Educational Administration
University of Oklahoma*

Executive Editor

Dr. Edna Manning

*Founder and President Emerita
Oklahoma School of Science and Mathematics*

Consulting Editor

Dr. Frank Wang

*President
Oklahoma School of Science and Mathematics*

Consultant

Alpha Plus Math Success with OAS Team

Oklahoma Academic Standards Alignment Editor / Contributing Author: Shannon Stewart

Editorial & Publishing Assistance: Toni Blewett, Jerry Plant, Wendy Pratt

Publisher: Jan Barrick, Chief Executive Officer, Alpha Plus Systems, Inc.



ALPHA PLUS
Educational Systems

3315 NW 63rd Street, Oklahoma City, OK 73116

(405) 842-8408

www.alphaplus.org

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
3rd grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
1	3.N.1.1	Read, write, discuss, and represent whole numbers up to 10,000. Representations may include numerals, expressions with operations, words, pictures, number lines, and manipulatives.	1	1
2	3.N.1.2	Use place value to describe whole numbers between 1,000 and 10,000 in terms of ten thousands, thousands, hundreds, tens, and ones, including expanded form.	26	17
3	3.N.1.3	Find 1,000 more or 1,000 less than a given four or five digit number. Find 100 more or 100 less than a given four or five digit number.	37	25
4	3.N.1.4	Use place value to compare and order whole numbers up to 10,000 using comparative language, numbers, and symbols.	51	33
5	3.N.3.1	Read and write fractions with words and symbols.	65	41
6	3.N.3.2	Construct fractions using length, set, and area models.	78	49
7	3.N.3.3	Recognize unit fractions and use them to compare and decompose fractions related to the same whole. Use the numerator to describe the number of parts and the denominator to describe the number of partitions.	93	57
8	3.N.3.4	Use models and number lines to order and compare fractions that are related to the same whole.	106	65
9	3.N.4.1	Use addition to determine the value of a collection of coins up to one dollar using the cent symbol and a collection of bills up to twenty dollars.	125	75

OAS Mathematics
Table of Contents
3rd grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
10	3.N.4.2	Select the fewest number of coins for a given amount of money up to one dollar.	142	87
11	3.GM.1.1	Sort three-dimensional shapes based on attributes.	158	99
12	3.GM.1.2	Build a three-dimensional figure using unit cubes when a shape/picture is shown.	173	109
13	3.GM.1.3	Classify angles as acute, right, obtuse, and straight.	189	121
14	3.GM.2.1	Find perimeter of polygon, given whole number lengths of the sides, in real-world and mathematical situations.	201	131
15	3.GM.2.8	Find the area of two-dimensional figures by counting total number of same size unit squares that fill the shape without gaps or overlaps.	216	141
16	3.GM.2.2	Develop and use formulas to determine the area of rectangles. Justify why length and width are multiplied to find the area of a rectangle by breaking the rectangle into one unit by one unit squares and viewing these as grouped into rows and columns.	230	151
17	3.GM.2.3	Choose an appropriate measurement instrument and measure the length of objects to the nearest whole centimeter or meter.	245	161
18	3.GM.2.4	Choose an appropriate measurement instrument and measure the length of objects to the nearest whole yard, whole foot, or half-inch.	254	167
19	3.GM.2.5	Using common benchmarks, estimate the lengths (customary and metric) of a variety of objects.	262	171

OAS Mathematics
Table of Contents
3rd grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
20	3.GM.2.6	Use an analog thermometer to determine temperature to the nearest degree in Fahrenheit and Celsius.	272	177
21	3.GM.2.7	Count cubes systematically to identify number of cubes needed to pack the whole or half of a three-dimensional structure.	290	189
22	3.GM.3.1	Read and write time to the nearest 5-minute (analog and digital).	302	197
23	3.GM.3.2	Determine the solutions to problems involving addition and subtraction of time in intervals of 5 minutes, up to one hour, using pictorial models, number line and skip counting.	316	207
24	3.N.2.1	Represent multiplication facts by using a variety of approaches, such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line and skip counting.	332	217
25	3.N.2.2	Demonstrate fluency of multiplication facts with factors up to 10.	352	231
26	3.N.2.3	Use strategies and algorithms based on knowledge of place value and equality to fluently add and subtract multi-digit numbers.	365	237
27	3.N.2.4	Recognize when to round numbers and apply understanding to round numbers to the nearest ten thousand, thousand, hundred, and ten and use compatible numbers to estimate sums and differences.	377	243
28	3.N.2.5	Use addition and subtraction to solve real-world and mathematical problems involving whole numbers.	389	249

OAS Mathematics
Table of Contents
3rd grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
		Use various strategies, including the relationship between addition and subtraction, the use of technology, and the context of the problem to assess the reasonableness of results.		
29	3.N.2.6	Represent division facts by using a variety of approaches, such as repeated subtractions, equal sharing, and forming equal groups.	408	261
30	3.N.2.7	Recognize the relationship between multiplication and division to represent and solve real-world problems.	424	273
31	3.N.2.8	Use strategies and algorithms based on knowledge of place value, equalities and properties of addition and multiplication to multiply a two-digit number by a one-digit number.	438	283
32	3.A.1.1	Create, describe, and extend patterns involving addition, subtraction, or multiplication to solve problems in a variety of contexts.	447	287
33	3.A.1.2	Describe the rule (single operation) for a pattern from an input/output table or function machine involving addition, subtraction, or multiplication.	459	295
34	3.A.1.3	Explore and develop visual representations of growing geometric patterns and construct the next steps.	476	307
35	3.A.2.1	Find unknowns represented by symbols in arithmetic problems by solving one-step open sentences (equations) and other problems involving addition, subtraction, and multiplication. Generate real-world	491	319

OAS Mathematics
Table of Contents
3rd grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
		situations to represent number sentences.		
36	3.A.2.2	Recognize, represent, and apply the number properties (communicative, identity, and associative properties of addition and multiplication) using models and manipulatives to solve problems.	502	325
37	3.D.1.1	Summarize and contrast a data set with multiple categories using a frequency table, line plot, pictograph, and/or bar graph with scaled intervals.	513	333
38	3.D.1.2	Solve one and two step problems using categorical data represented with a frequency table, pictograph, or bar graph with scaled intervals.	532	345

Teacher's Guide

3.N.3.1 Read and write fractions with words and symbols.

Real-World Connections

Students will read and write fractions. This skill could be used in measuring while cooking and baking. Have a picture of a candy bar for each student and show them how to fold it to make 4 equal pieces. They can then cut it into four equal pieces. Follow the steps in Modeling 5 and 6 to illustrate how to represent these pieces as a fraction.

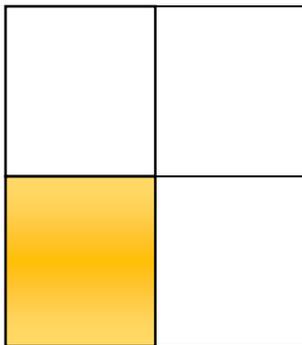
Vocabulary

fractions, numerator, denominator, symbols

Modeling

Step 1: Discuss the denominator and numerator with students.

Tell students the bottom number (the denominator) is the total number of parts. The top number (the numerator) represents the parts remaining.



The square to the left is divided into four equal parts. The number of parts (4) is the denominator, or the bottom number of the fraction $\frac{\quad}{4}$. The number of parts shaded (1) when it is represented with a polygon, is the numerator, or the top number of the fraction $\frac{1}{\quad}$. The fraction that represents the square on the left is $\frac{1}{4}$.

Step 2: Discuss fractions representing 1 whole.

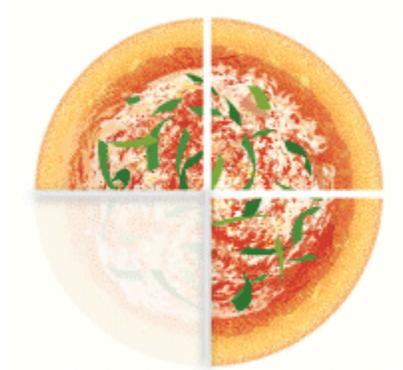


A fraction is taking 1 whole of anything and dividing it into equal parts. If you have one whole pizza and you want to split the pizza equally with a friend, you would cut it in half. So, there would be two halves of the one whole. ($\frac{1}{2} + \frac{1}{2} = 1$)



Teacher's Guide 3.N.3.1

Step 3: Ask students to help solve the next pizza fraction.

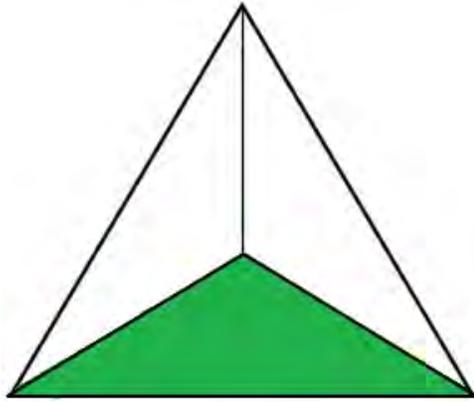


- 1) Find the denominator.
How many pieces of the pizza were there total? _____
Answer: 4
- 2) Find the numerator.
How many pieces of the pizza are still left over? _____
Answer: 3
- 3) Put your numerator and denominator together.
What is the number that is on top of a fraction? _____
Answer: numerator
What is your numerator? _____
Answer: 3
What is the number that is on the bottom of the fraction? _____
Answer: denominator
What is your denominator? _____
Answer: 4
- 4) What fraction represents the left-over pizza shown above? _____
Answer: $\frac{3}{4}$
- 5) What fraction represent the piece of pizza that was taken away or eaten?

Answer: $\frac{1}{4}$

Teacher's Guide 3.N.3.1

Step 4: Ask students to help you solve another example:



- 1) What is the fraction represented by the number of pieces shaded in the triangle? _____
Answer: $\frac{1}{3}$
- 2) What is the fraction represented by the number of pieces not shaded in the triangle? _____
Answer: $\frac{2}{3}$

Teacher's Guide 3.N.3.1

Extension Activities

For each fraction create three cards. Card one shows a fraction in number form, card two a fraction in word form and card three a fraction in picture form. Create these cards for several fractions. Place the cards face down and take turns trying to collect a set of three cards that represent the same fraction.

Oklahoma State Department of Education objective analysis of 3.N.3.1

<http://okmathframework.pbworks.com/w/page/112827220/3-N-3-1>

Encourage students to use visuals when working with fractions; go to:

<http://3-5cctask.ncdipi.wikispaces.net/3.NF.1-3.NF.3>

Answer Key 3.N.3.1

Guided Practice

1. $\frac{3}{4}$
2. $\frac{1}{2}$
3. $\frac{2}{12}$
4. $\frac{1}{3}$
5. Check pictures for accuracy; three eighths
6. Check pictures for accuracy; two thirds
7. Check pictures for accuracy; three fourths
8. $\frac{6}{8}$
9. $\frac{4}{8}$
10. $\frac{2}{3}$

Independent Practice

1. One fourth; Check pictures for accuracy.
2. Three eighths; Check pictures for accuracy.
3. Two thirds; Check pictures for accuracy.
4. Three twelfths; Check pictures for accuracy.
5. Three tenths; Check pictures for accuracy.
6. $\frac{3}{4}$
7. $\frac{2}{8}$
8. $\frac{1}{3}$
9. $\frac{4}{12}$
10. $\frac{3}{8}$
11. $\frac{1}{2}$
12. $\frac{10}{12}$
13. $\frac{3}{8}$
14. $\frac{1}{4}$
15. $\frac{2}{3}$

Answer Key 3.N.3.1

Independent Practice

16. $\frac{2}{8}$

17. $\frac{4}{8}$ or $\frac{1}{2}$

18. $\frac{6}{10}$

19. $\frac{7}{10}$

20. $\frac{3}{10}$

Continuous Review

1. (3.N.1.4) <
2. (3.N.1.4) >
3. (3.N.1.4) 2,432; 2,492; 3,492
4. (3.N.1.1) 9,264
5. (3.N.1.1) 77,033
6. (3.N.1.2) 1,000+600+90+3
7. (3.N.1.2) 4,000+500+30+1
8. (3.N.1.2) 50,000+3,000+900+30+3
9. (3.N.1.3) 8,458; 8,658; 7,558; 9,558
10. (3.N.1.3) 17,624; 37,624

3.N.3.1 Read and write fractions with words and symbols.

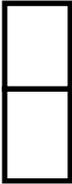
Real-World Connections

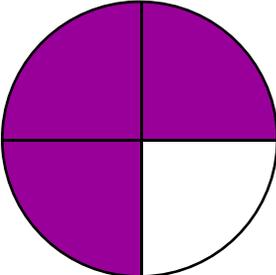
Your friends set up a pie shop and let you visit when you like. A customer orders two-thirds of a pecan pie and three-fourths of an apple pie. You are learning about fractions in math class and grab a napkin to practice writing them in number form as $\frac{2}{3}$ and $\frac{3}{4}$.

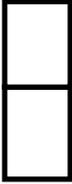
Vocabulary

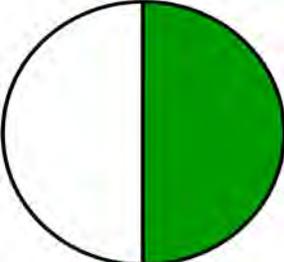
fractions	a number that expresses parts of a whole or a set
numerator	the top number of a fraction
denominator	the bottom number of a fraction
symbols	symbols and signs are commonly used to represent values, equality, operations, grouping, and mathematical terms

Write the fraction shown by the shaded portions.

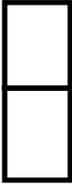
1.  ← Shaded parts (numerator)
 ← Total parts (denominator)

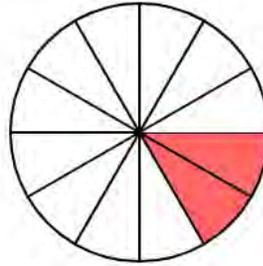


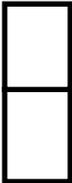
2.  ← Shaded parts (numerator)
 ← Total parts (denominator)

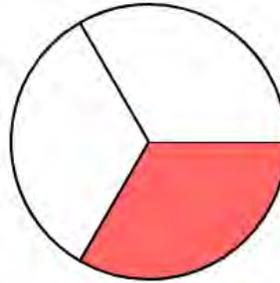


Write the fraction shown by the shaded portions.

3.  ← Shaded parts (numerator)
 ← Total parts (denominator)



4.  ← Shaded parts (numerator)
 ← Total parts (denominator)



Divide and shade the rectangle to show the fraction given. Write each fraction using words also.

5. $\frac{3}{8}$ 

Word form: _____

6. $\frac{2}{3}$ 

Word form: _____

7. $\frac{3}{4}$ 

Word form: _____

Answer the following questions.

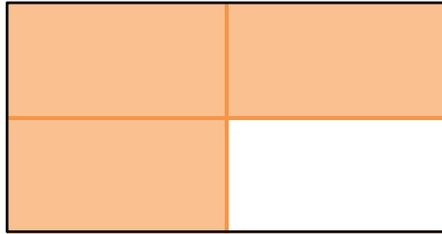
8. A pie is divided into 8 pieces, and 6 are eaten. Write the fraction that shows the pieces eaten. Draw a picture below to help you. _____
9. You are making 8 cookies. Four are chocolate chip. Write the fraction to show the cookies that are not chocolate chip. Draw a picture below to help you.

10. There are three packages of gum in the candy bowl. Two packages are peppermint. One package is watermelon. Write the fraction that shows the packages of peppermint gum in the bowl. Draw a picture below to help you.

3.N.3.1 Read and write fractions with words and symbols.

Divide and shade the rectangle to show the fraction given. Write each fraction in word form.

Example: $\frac{3}{4}$



Word form: **three-fourths**

1. $\frac{1}{4}$



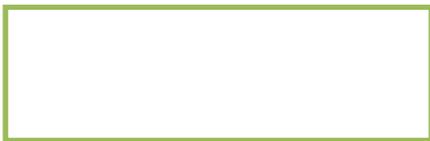
Word form: _____

2. $\frac{3}{8}$



Word form: _____

3. $\frac{2}{3}$



Word form: _____

4. $\frac{3}{12}$



Word form: _____

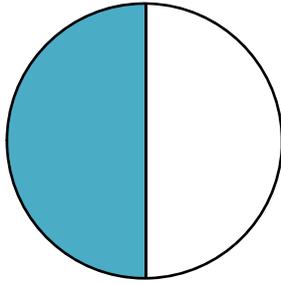
5. $\frac{3}{10}$



Word form: _____

Write the fractions which name the shaded portions.

Example:

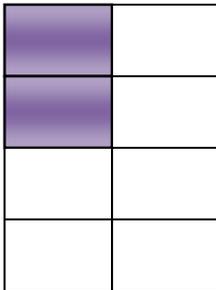


$\frac{1}{2}$

6.



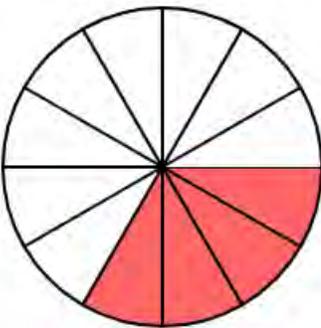
7.



8.

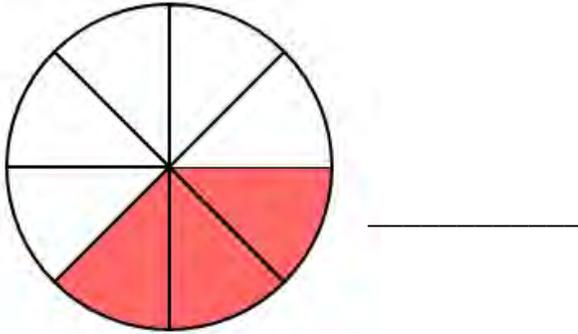


9.



Answer the following question.

10.



Answer the following questions.

Example: A pie is cut into 3 pieces. Three pieces are eaten. What fraction of the pie is left?

$$\frac{9}{12}$$

11. A cake is half chocolate and half vanilla. What fraction of the cake is vanilla?

12. A graham cracker is broken into 12 pieces. Two pieces are eaten. What fraction is left?

13. A pizza is cut into 8 pieces. Five pieces are eaten. Write the fraction that names the uneaten pieces.

14. An ice cream cone has 4 scoops of ice cream. One scoop is chocolate, one scoop is vanilla, and 2 scoops are strawberry. What fraction of the ice cream is vanilla?

15. A sub sandwich is cut in 3 pieces. One piece is eaten. What fraction is left?

Answer the following questions.

Example:

There is a bowl with 10 pieces of fruit. 5 pieces of the fruit are bananas, 3 are peaches and 2 are apples.

What fraction of the fruit are peaches?

$$\frac{3}{10}$$

There are 8 cupcakes in a box. Two are lemon, 2 are strawberry, 2 are chocolate, and 2 are vanilla.

16. What fraction of the cupcakes are lemon?

17. What fraction of the cupcakes are strawberry and vanilla?

There are 3 apple tarts, 3 peach tarts, and 4 chocolate tarts on the table.

18. What fraction of the tarts are not chocolate?

19. What fraction of the tarts are chocolate and peach?

20. What fraction of the tarts are apple?

Continuous Review (3.N.3.1)

Name: _____

Use the greater than ($>$), less than ($<$), and equal to ($=$) symbols to compare the sets of numbers.

1. 24,629 ___ 28,635

2. 5,912 ___ 5,412

Place the sets of numbers in order from least to greatest.

3. 2,432; 3,492; 2,492 _____

Write the following numbers in standard form.

4. Nine thousand two hundred sixty-four _____

5. Seventy-seven thousand thirty-three _____

Write each number in expanded form.

6. 1,693 _____

7. 4,531 _____

8. 53,933 _____

Write 100 less and 100 more than the number, write 1,000 less and 1,000 more than the number, then write 10,000 less and 10,000 more than the number.

	100 less	100 more	1,000 less	1,000 more
9. 8,558				
	10,000 less	10,000 more		
10. 27,624				

A

acute angle: an angle with a measure less than 90°

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

analog clock: a clock with hour, minute, and, sometimes, second hands

angles: two rays meeting at a common vertex

area: the measurement of the amount of space within a closed two-dimensional space

area models: a model using area to show multiplication

arrays: an orderly arrangement of objects into a rectangular configuration

associative property of addition: $(a+b) + c = a + (b + c)$

associative property of multiplication: $(a \times b) \times c = a \times (b \times c)$

attributes: characteristics

B

bar graph: a display of categorical data in which vertical or horizontal bars represent the count of a category

benchmarks: something by which other things can be measured or compared

C

cent: equals one hundredth of a dollar (100 cents equal one dollar)

centimeter: a standard length of measurement that is equal to $1/100$ of a meter

commutative property of addition: numbers may be added together in any order

commutative property of multiplication: numbers may be multiplied together in any order

compare: tells how two or more things are alike

compatible numbers: numbers close in value to the actual numbers in a problem but easier to estimate or calculate

cube: the regular solid of six equal square sides

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

cylinder: a three-dimensional figure with two parallel lines and congruent circles and bases

D

data: a collection of information

degree: a unit for measuring temperature

degrees celsius: a metric unit for measuring temperature in most of the world

degree fahrenheit: a customary unit for measuring temperature in the United States

denominator: the top number of a fraction

digit: a single whole number (0 to 9) in a number 10 or larger

digital clock: a clock which displays time using numerical digits

difference: the answer to a subtraction problem

dime: a coin worth 10 cents

division: sharing or grouping a number into equal parts

dollar: a currency unit (100 cents equal one dollar)

E

edge: the line segment where two faces of a solid meet

estimate: to make an approximate calculation, often based in rounding

expanded form: a multi-digit number is expressed in expanded form when it is written as a sum of single-digit multiples of powers of ten

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

equality: state of being equal

equal-sized groups: groups of equal value or amount

equal to: (=) a sign indicating two numbers are the same ($7=7$)

F

face: a plane figure that serves as one side of a solid figure

factors: a number to be multiplied; In $2 \times 3 = 6$, 2 and 3 are factors

foot: 1 foot is equivalent to 12 inches

formulas: a mathematical rule written using symbols, usually as an equation describing a certain relationship between quantities

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

frequency table: a representation of data in which categories are listed in one column (row) of a table and the number occurrences (frequency) of each category is indicated in another column (row)

function machine: an input/ output model to show one number entering and another number exiting

G

geometric patterns: a pattern formed using geometric shapes

greater than: (>) the relationship of one number being larger than another number

I

identity property of addition: adding zero won't change a number

identity property of multiplication: multiplying by one won't change a number

inch: a unit of length

input/ output table: usually a two-column or two-row table with one side listing the inputs of a rule and the other side listing the corresponding outputs

interval: a time period between defined start and end times

L

length: distance from one end to the other

less than: the relationship of one number being smaller than another number ($<$)

line plot: a representation of data in which categories are listed underneath point on a number line, and in which occurrences (frequency) of each category is represented by a corresponding number of marks above each category's point

M

manipulatives: concrete materials used to represent mathematical concepts, operations, and relationships

meter: the meter is the base unit of length in the international metric system

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

model: a mathematical representation for real-world or mathematical objects, properties, actions, or relationships

more than: less than: the relationship of one number being larger than another number ($>$)

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

N

nickel: a coin worth 5 cents

number line: a line on which numbers are marked

number sentence: a mathematical sentence written in numerals and mathematical symbols

numerals: a symbol or mark used to represent a number

numerator: the top number of a fraction

O

obtuse angle: an angle with a measure more than 90°

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

order: an arrangement of a set group of objects

P

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

penny: a coin worth 1 cent

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

perimeter: the total length of all edges of a polygon

pictograph: a graph that uses pictures to represent quantities

polygon: a closed, two-dimensional figure comprised of line segments connected end-to-end

product: the answer to a multiplication problem; in $2 \times 3 = 6$, the product is 6

Q

quarter: a coin worth 25 cents

quotient: answer to a division problem

R

ray: parts of a line that begins at one end point and extends forever in only one direction

rectangle: a shape with four sides and four right angles

rectangular prism: the regular solid of six rectangular sides; a solid figure where one face is rectangle and the 3 other faces are triangles

repeated addition: the process of repeatedly adding the same number; used as a strategy for introducing multiplication

repeated subtraction: the process of repeatedly subtracting the same number; used as a strategy for introducing division

right angle: an angle with a measure of 90°

round: to change a number to a more convenient value

rule: an algebraic expression that fits a set of numbers

S

set: a set is a collection of items with one of each member

shapes: two-dimensional figures of the faces of three-dimensional figures

skip counting: counting forward or backward in a given order

solid figures: three-dimensional shape

sphere: a round solid figure

straight angle: an angle that equals 180°

subtraction: the process of finding the difference between two numbers

sum: the answer to an addition problem

symbols: symbols and signs are commonly used to represent values, equality, operations, grouping, and mathematical terms

T

temperature: a measurement of how hot or cold something is

thermometer: a tool for measuring temperature

three-dimensional figures: a figure having three dimensions: length, width, and height

three-dimensional structure: a structure having three dimensions: length, width, height

time: continuum from past to present to future; the interval between two events or the duration of an event

triangular prism: a solid figure with two faces that are triangles

triangular pyramid: a solid figure where all the faces are triangles

two-dimensional figure: a figure having two dimensions of length and width (breadth)

U

unknowns: a number we do not know – A variable representing an unknown quantity

unit fractions: a fraction with a numerator of 1, such as $\frac{1}{3}$ or $\frac{1}{5}$

V

value: the numerical worth or amount

vertex: the point at which two line segments, lines, or ray meet to form an angle

volume: a measurement of the amount of space within a closed three-dimensional shape

W

width: breadth/distance across from side to side

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

Y

yard: 1 yard is equivalent to 3 feet or 36 inches