

TEACHER'S GUIDE

SUCCESS **OAS**
with

Math 1

**Ensuring Student Success
with
Oklahoma Academic Standards**

Written by Oklahoma Teachers for Oklahoma Teachers

Jessica Miller



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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
1st grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
1	1.N.1.1	Recognize numbers to 20 without counting the quantity of structured arrangements.	1	1
2	1.N.1.2	Use concrete representations to describe whole numbers between 10 and 100 in terms of tens and ones.	15	11
3	1.N.1.4	Count forward, with and without objects, from any given number up to 100 by 1s, 2s, 5s, and 10s.	32	23
4	1.N.1.5	Find a number that is 10 more or 10 less than a given number up to 100.	45	33
5	1.N.1.6	Compare and order whole numbers from 0 to 100.	58	41
6	1.N.1.7	Use knowledge of number relationships to locate the position of a given whole number on an open number line up to 20.	74	51
7	1.N.1.8	Use objects to represent and use words to describe the relative size of numbers, such as more than, less than, and equal to.	87	61
8	1.A.1.1	Identify, create, complete, and extend repeating, growing, and shrinking patterns with quantity, numbers, or shapes in a variety of real world and mathematical contexts.	102	73
9	1.GM.1.1	Identify trapezoids and hexagons by pointing to the shape when given the name.	118	83
10	1.GM.1.2	Compose and decompose larger shapes using smaller two-dimensional shapes.	127	89
11	1.GM.1.4	Recognize three dimensional shapes such as cubes, cones, cylinders, and spheres.	142	101

OAS Mathematics
Table of Contents
1st grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
12	1.GM.1.3	Compose structures with three-dimensional shapes.	158	111
13	1.N.3.1	Partition a regular polygon using physical models and recognize when those parts are equal.	172	121
14	1.N.3.2	Partition (fair share) sets of objects into equal groupings.	183	127
15	1.GM.2.2	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.	195	137
16	1.GM.2.3	Measure the same object/distance with units of two different lengths and describe how and why the measurements differ.	208	147
17	1.GM.2.1	Use nonstandard and standard measuring tools to measure the length of objects to reinforce the continuous nature of linear measurement.	224	161
18	1.GM.2.4	Describe a length to the nearest whole unit using a number and a unit.	242	175
19	1.GM.2.5	Use standard and nonstandard tools to identify volume/capacity. Compare and sort containers that hold more, less, or the same amount.	257	187
20	1.GM.3.1	Tell time to the hour and half hour (analog and digital).	273	197
21	1.N.2.1	Represent and solve real-world and mathematical problems using addition and subtraction up to ten.	290	209
22	1.N.2.2	Determine if equations involving addition and subtraction are true.	317	231

OAS Mathematics
Table of Contents
1st grade

Suggested Order	Strand Number	Strand Description	Teacher Guide Page Number	Student Book Page Number
23	1.N.2.3	Demonstrate fluency with basic addition facts and related subtraction facts up to 10.	329	239
24	1.N.1.3	Read, write, discuss, and represent whole numbers up to 100. Representations may include numerals, addition and subtraction, pictures, tally marks, number lines and manipulatives, such as bundles of sticks and base 10 blocks.	381	265
25	1.N.4.1	Identify pennies, nickels, dimes, and quarters by name and value.	397	275
26	1.N.4.2	Write a number with the cent symbol to describe the value of a coin.	407	281
27	1.N.4.3	Determine the value of a collection of pennies, nickels, or dimes up to one dollar counting by ones, fives, or tens.	417	287
28	1.D.1.2	Use data to create picture and bar-type graphs to demonstrate one-to-one correspondence.	432	299
29	1.D.1.1	Collect, sort, and organize data in up to three categories using representations (e.g., tally marks, tables, and Venn diagrams.)	448	309
30	1.D.1.3	Draw conclusions from pictures and bar-type graphs.	463	317

Teacher's Guide

1.N.1.1 Recognize numbers to 20 without counting the quantity of structured arrangements.

Real-World Connections

The students will recognize a structured number arrangement to 20 without counting. Recognizing structured number arrangements helps students quickly recall a number which will lead to the student's cognitive math computation and problem solving skills in higher mathematics.

Vocabulary

numbers, counting, quantity

Modeling

Step 1: The teacher will state that she wants to play a game of dominoes, but we don't have much time and must play quickly. The teacher will explain the process and rules of dominoes, and then will review all the number combinations.

Step 2: The teacher will pass out the dominoes to the students. The teacher will play a group game of dominoes for demonstration. The teacher will proceed playing dominoes with the whole group until out of dominoes. The teacher will state the vocabulary words while playing. For example, "What is the quantity of this domino?" "What number would be represented with this domino?" "Which is faster counting the dots or just knowing the number arrangement?"

Step 3: The class will break into small groups and play a game of dominoes while naming the number arrangement.

Step 4: The teacher will explain that there are other ways to arrange numbers (dice, five frames, playing cards, etc...); then move onto guide practice, independent practice, and continuous review with the students.

Extension Activities

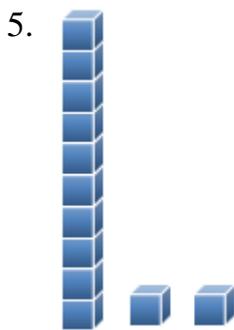
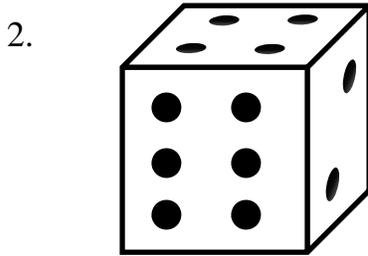
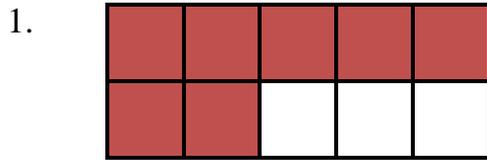
See also Oklahoma State Department of Education's OAS objective wiki at <http://okmathframework.pbworks.com/w/page/113057992/1-N-1-1>

Dot Pattern Match game-Turn all cards over to play matching game with the dot pattern cards. <https://app.box.com/s/fca91fccba7d3f6dcd30>

Fill the tower activity uses die and linking cubes or counters <http://rbanksmath1unit.weebly.com/activity-4-roll-a-tower.html>

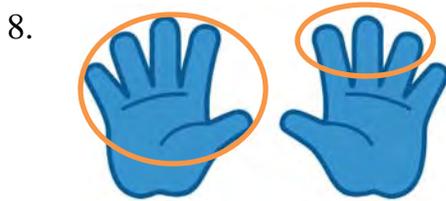
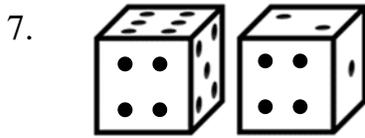
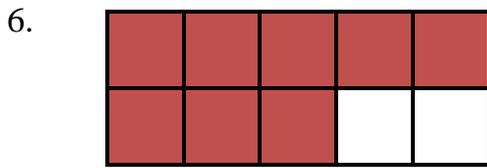
Answer Key 1.N.1.1

Guided Practice



Answer Key 1.N.1.1

Guided Practice



10. 9

Independent Practice

1. 12
2. 9
3. 11
4. 10
5. 13
6. 15
7. 19
8. 20
9. 16
10. 18
11. 16
12. 7
13. 9
14. 3
15. 6
16. 1
17. 5
18. 4

Answer Key 1.N.1.1

Independent Practice

19. 3

20. 9

Continuous Review

1. (1.N.1.1) 19

2. (1.N.1.1) 11

3. (1.N.1.1) 7

4. (1.N.1.1) 9

5. (1.N.1.1) 8

6. (1.N.1.1) 2

7. (1.N.1.1) 20

8. (1.N.1.1) 5

9. (1.N.1.1) 6

10. (1.N.1.1) 10

1.N.1.1 Recognize numbers to 20 without counting the quantity of structured arrangements.

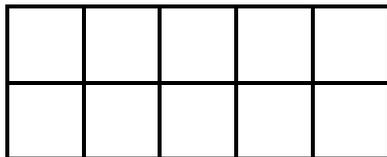
Real-World Connections Bob really likes math. He knows that you can write a **number** to tell how many. He **counts** things to find how many of something there are. He can look at a domino and knows the **quantity** or how many dots there are without counting. He wants to show his mom all the ways to make his favorite number of 6. Can you help him?



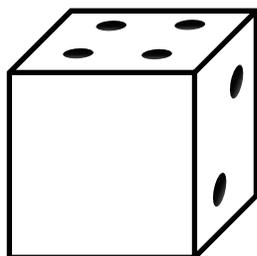
Vocabulary

number	numbers describe quantities or values
counting	to find how many of something there are
quantity	amount, number of, total, sum, size or extent: how much or how many?

1. Fill in the ten frame to make 7.



2. Draw the dots to show what a number 6 would look like on a die.



Guided Practice (1.N.1.1)

Name: _____

Read and answer.

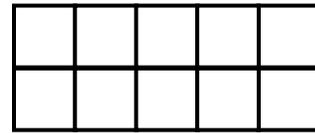
3. Circle 6 fingers.



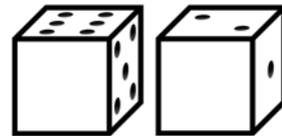
4. Draw 17 tally marks.

5. Draw 12 blocks.

6. Fill in the ten blocks to make 8.



7. Draw the dots to show the number 8 on the dice.

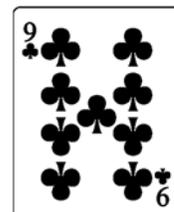


8. Circle 8 fingers.



9. Draw 19 tally marks.

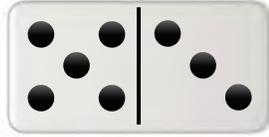
10. Write the number that is on the card.



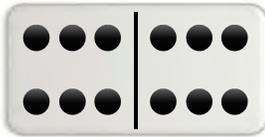
1.N.1.1 Recognize numbers to 20 without counting the quantity of structured arrangements.

Write the number shown on the domino.

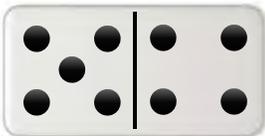
Example:



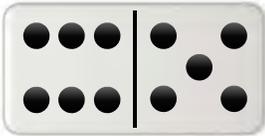
1.



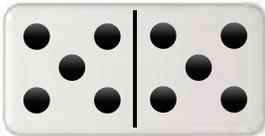
2.



3.



4.



Independent Practice (1.N.1.1)

Name: _____

Write the number shown with the tally marks.

Example:  

5.  

6.  

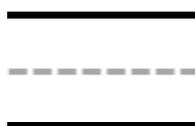
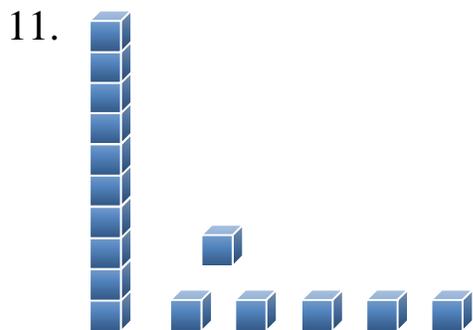
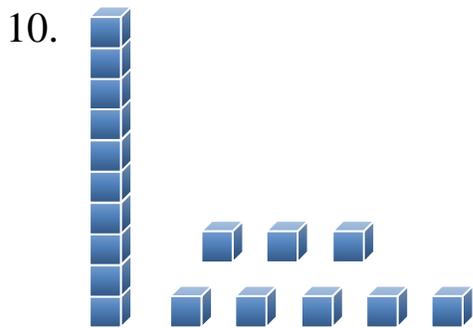
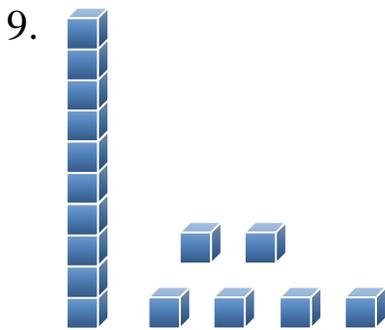
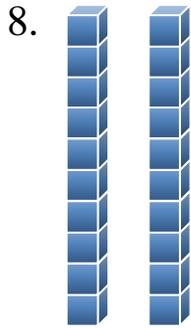
7.  

Independent Practice (1.N.1.1)

Name: _____

Write the number shown with the base ten blocks.

Example:



Independent Practice (1.N.1.1)

Name: _____

Write the number of fingers shown on the hands.

Example:



The example shows two blue hands. The left hand is open with all five fingers extended. The right hand has three fingers extended (index, middle, and ring). To the right of the hands is a three-line grid (top solid, middle dashed, bottom solid) with the number 8 written in orange in the center.

12.



13.



14.



15.

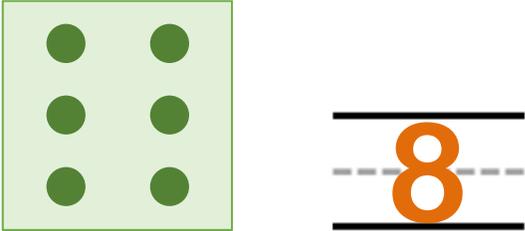


Independent Practice (1.N.1.1)

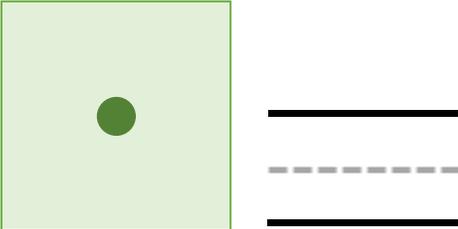
Name: _____

Write the number of dots on the tile.

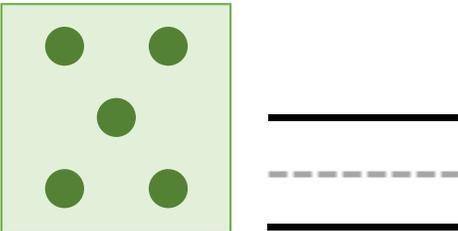
Example:



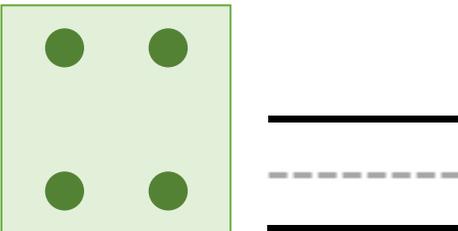
16.



17.



18.

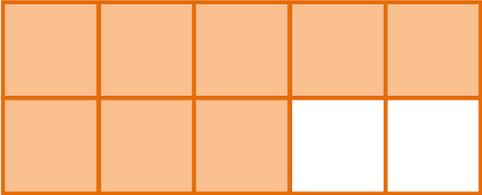


Independent Practice (1.N.1.1)

Name: _____

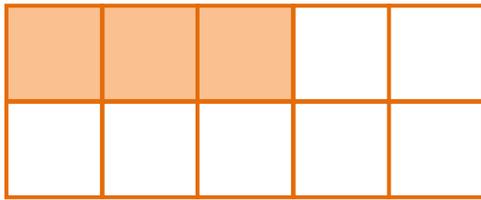
Write the number shown in the ten frame.

Example:

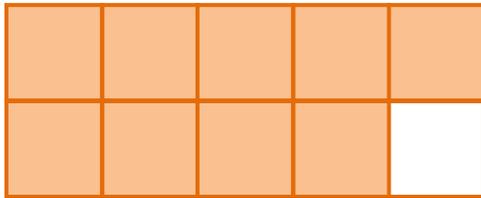


8

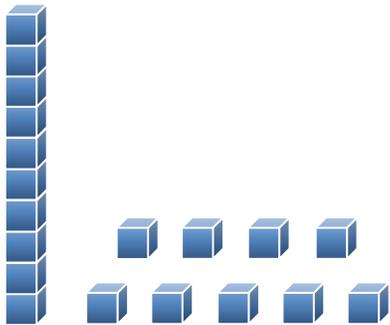
19.



20.

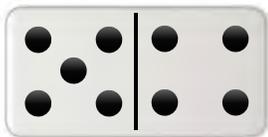


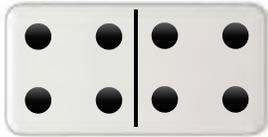
Write the number for the shown object.

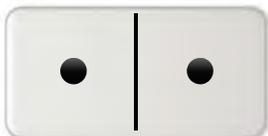
1.  _____

2.  _____

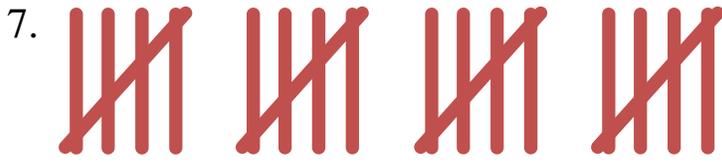
3.  _____

4.  _____

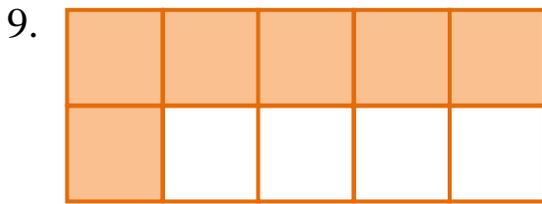
5.  _____

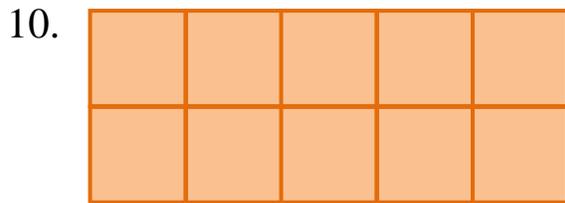
6.  _____

Write the number for the shown object.









Teacher's Guide

1.D.1.3 Draw conclusions from picture and bar-type graphs.

Real-World Connections

The students will draw conclusions from picture and bar-type graphs.

Vocabulary

picture graphs

Modeling

Step 1: The teacher will have 5 red blocks, 5 green blocks, 7 yellow blocks, and 4 blue blocks. The teacher will place the blocks where the students can see them but in one large pile.

Step 2: The teacher will ask the students, “Which color do you think you have the most of? Which color the least? How many reds are there?”

Step 3: The teacher will sort the blocks into color groups and place the blocks in color piles. Ask the students the same questions as in Step 2.

Step 4: Make a bar-graph and fill out the data with the student’s assistants in counting each color block. Ask the same questions as in Step 2. Ask the students which way was easier to read and find the information.

Extension Activities

See also Oklahoma State Department of Education’s OAS objective wiki at <http://okmathframework.pbworks.com/w/page/113058478/1-D-1-3>

Adapted from resources on Oklahoma State Department of Education website:

This link will take you to more information and activities to use with data and graphs.

<http://www.scimathmn.org/stemtc/frameworks/111c-number-data>

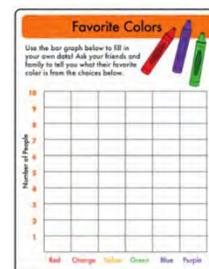
Free download students making a bar graph of their favorite color.

<https://www.education.com/worksheet/article/bar-graph-favorite-color/>

Bar graph data sorting activity from Shodor Education Foundation, Inc.,

© 2017 Shodor

<http://www.shodor.org/interactivate/activities/BarGraphSorter/>



Teacher's Guide 1.D.1.3

Extension Activities

Bug graphing game from PBS Kids Cyberchase:

<http://pbskids.org/cyberchase/math-games/bugs-in-the-system/>

Free bar graph worksheets for favorite weather and toys

<https://www.teacherspayteachers.com/Product/BarPicture-Graphs-1801930>

Name _____

our Favorite weather Graph

Use the tally chart to create the graphs below.

Weather	Tally	Total
 sun		
 rain		
 snow		

Favorite Weather Picture Graph

 sun							
 rain							
 snow							

Favorite Weather Bar Graph

 sun							
 rain							
 snow							

0 1 2 3 4 5 6 7

1 How many people liked rain and snow? _____

2 How many more people liked sun than rain? _____

Name _____

our Favorite Toy Graphs

Use the tally chart to create the graphs below.

Weather	Tally	Total
 blocks		
 cars		
 dolls		

Favorite Toy Picture Graph

 blocks							
 cars							
 dolls							

Favorite Toy Bar Graph

 blocks							
 cars							
 dolls							

0 1 2 3 4 5 6 7

1 How many people liked blocks and cars? _____

2 How many more people liked dolls than cars? _____

Answer Key 1.D.1.3

Guided Practice

1. 6
2. 6
3. keyboard
4. trumpet
5. 16
6. 2
7. 4
8. 2
9. 4
10. 10

Independent Practice

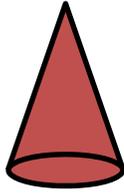
1. 6
2. 9
3. 3
4. 6
5. cat
6. bird
7. 9
8. 15
9. 6
10. 24
11. 7
12. 5
13. 3
14. 9
15. ice cream
16. popcorn
17. 12
18. 12
19. 2
20. 24

Answer Key 1.D.1.3

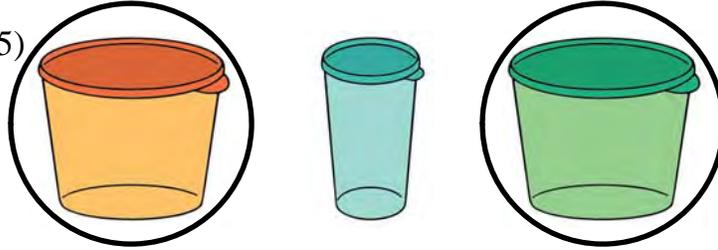
Continuous Review

1. (1.N.1.6) 5, 12, 21, 50, 60

2. (1.GM.1.2)



3. (1.GM.2.5)



4. (1.N.2.1) $3 + 3 = 6, 6 = 3 + 3$

5. (1.N.2.2) $9 = 8 + 1$

6. (1.N.2.3) 5

7. (1.N.4.1) 25¢

8. (1.N.4.3) 5¢

9. (1.N.4.3) 70¢

10. (1.D.1.1) C

1.D.1.3 Draw conclusions from picture and bar-type graphs.

Real-World Connections

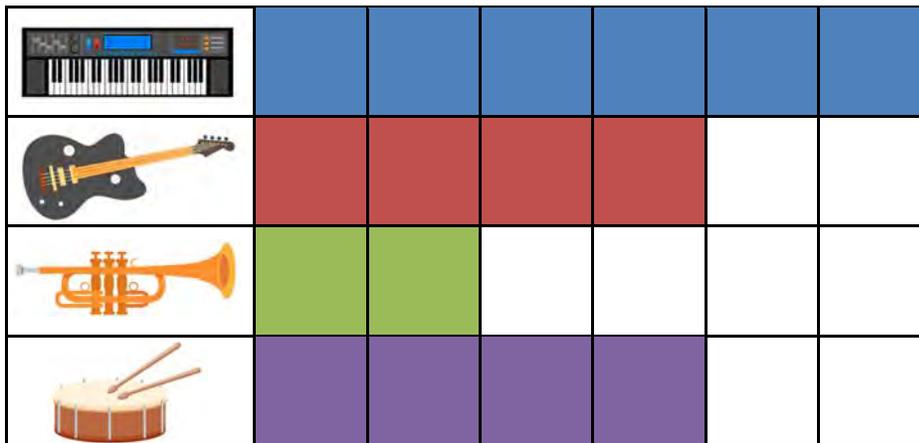


Denton has a bar graph that shows how many trucks, cars, and bikes he has. He needs to see which one is the most and which one is the least. He can see that the one with the longest bar has the most and the one with the shortest bar has the least.

Vocabulary

picture graphs a graph that uses pictures to show quantities

Sarah asked kids which instrument they liked the best. Use the bar graph to answer the questions.



1. How many chose  ? _____

2. How many chose  and  ? _____

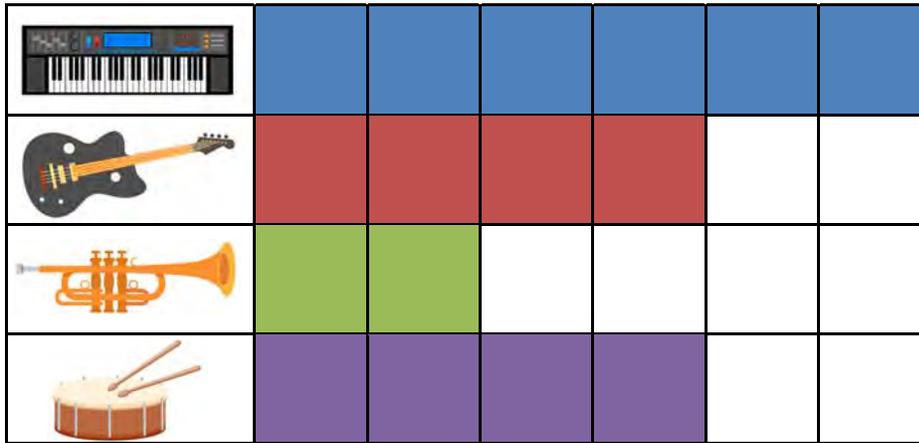
3. Circle the instrument was chosen the most?



Guided Practice (1.D.1.3)

Name: _____

Sarah asked kids which instrument they liked the best. Use the bar graph to answer the questions.



4. Circle the shape that was chosen the least?



5. How many votes were used to make the graph?

6. How many more chose  over  ?

7. How many chose  ?

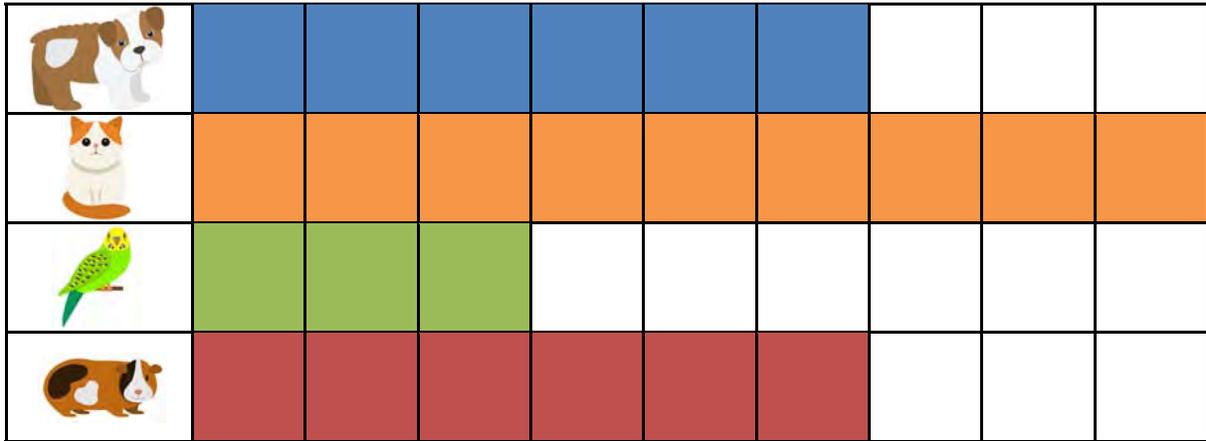
8. How many chose  ?

9. How many chose  ?

10. How many chose  and  ?

1.D.1.3 Draw conclusions from picture and bar-type graphs.

Mrs. Miller's class voted for their favorite pet. Use the graph to answer the questions.



1. How many kids chose a dog? _____

2. How many kids chose a cat? _____

3. How many kids chose a bird? _____

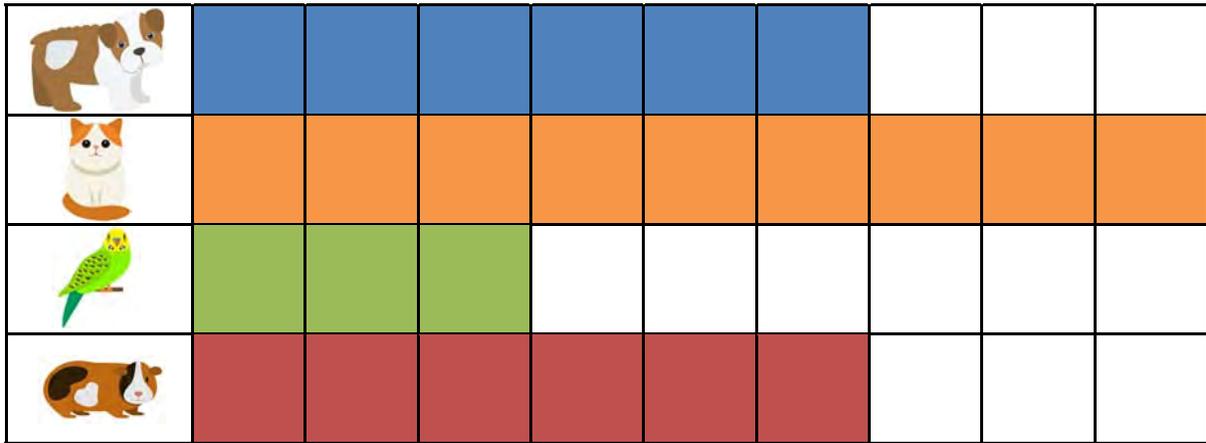
4. How many kids chose a guinea pig? _____

5. Which pet did the class like the best? _____

Independent Practice (1.D.1.3)

Name: _____

Mrs. Miller's class voted for their favorite pet. Use the graph to answer the questions.



6. Which pet did the class like the least? _____

7. How many total kids picked a bird and a guinea pig? _____

8. How many total kids picked a dog and a cat? _____

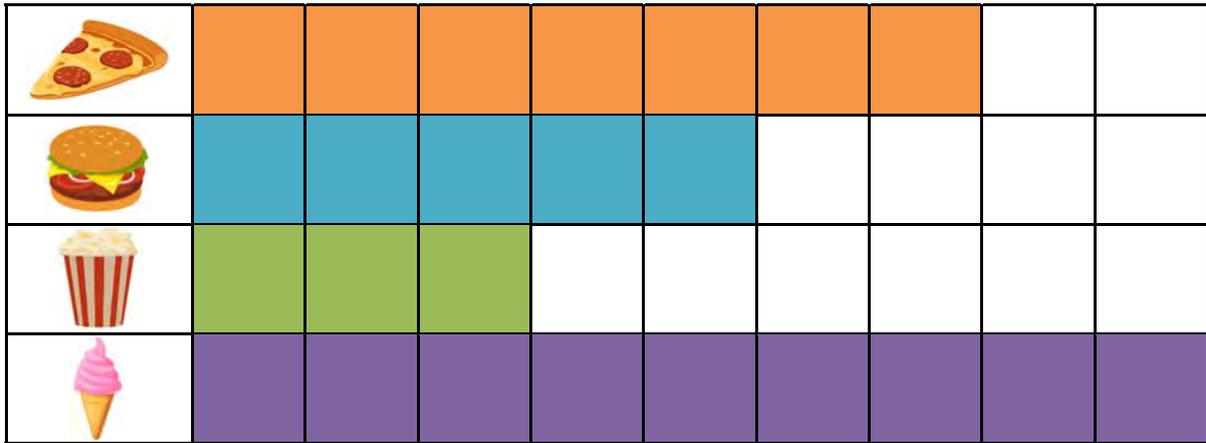
9. How many more kids liked cats than bird? _____

10. How many kids voted for their favorite pet? _____

Independent Practice (1.D.1.3)

Name: _____

Mrs. Miller's class voted for their favorite food. Use the graph to answer the questions.



11. How many kids chose pizza?

12. How many kids chose a hamburger?

13. How many kids chose popcorn?

14. How many kids chose ice-cream?

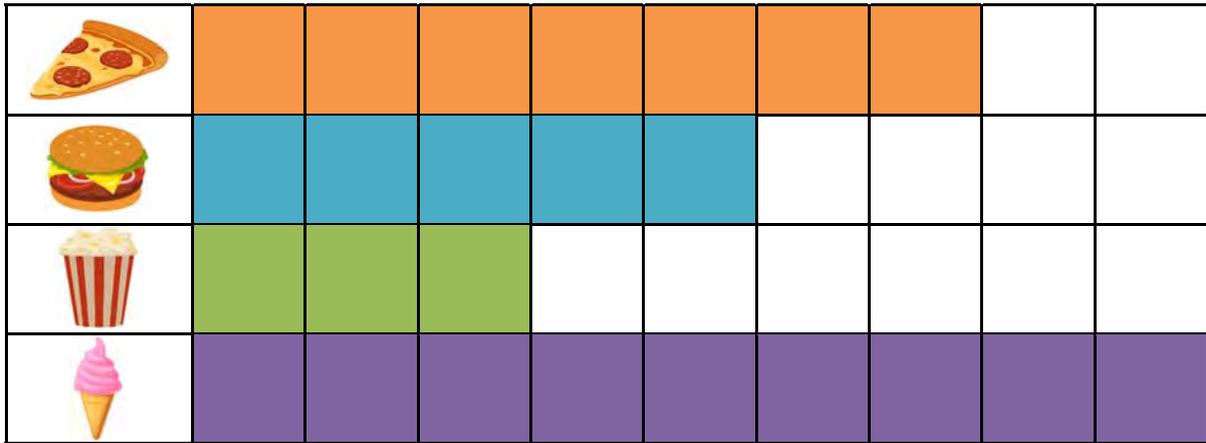
15. Which food did the class like the best?

16. Which food did the class like the least?

Independent Practice (1.D.1.3)

Name: _____

Mrs. Miller's class voted for their favorite food. Use the graph to answer the questions.



17. How many total kids picked popcorn and ice-cream? _____

18. How many total kids picked pizza and hamburger? _____

19. How many more kids liked hamburgers than popcorn? _____

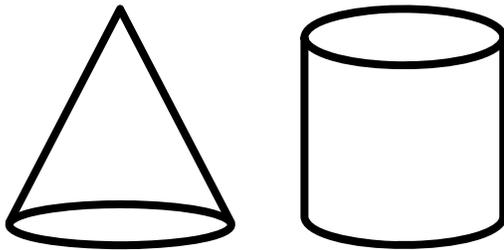
20. How many kids voted for their favorite food? _____

Answer the following questions.

1. Order the numbers from least to greatest.

5, 60, 12, 21, 50

2. Color the cone.



3. Circle 2 containers that hold the same amount.



Write an addition sentence to the following word problem.

4. Cole has 3 cars. He buys 3 more. How many cars does he have in all?

$$\square + \square = \square$$

$$\square = \square + \square$$

5. Circle the true fact.

$$5 + 1 = 4 \quad 9 = 8 + 1$$

Continuous Review (1.D.1.3)

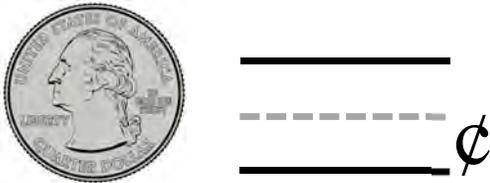
Name: _____

Answer the following questions.

6. Solve.

$$8 - 3 = \underline{\hspace{2cm}}$$

7. Write the amount of the coin.



Write the total value of coins.



10. Which letter was chosen the most?

A				
B				
C				
D				

A

addition facts: an equation that combines two or more addends together to find the total or the sum

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

analog: represented by a continuously variable physical quantity such as spatial position

B

bar graph: a chart used to sort items on a vertical or horizontal graph

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

bundles of sticks: a group of sticks usually grouped into 10 or 100 to represent the hundreds or tens digit

C

capacity: the maximum amount or number that can be contained or accommodated, e.g., a jug with a one-gallon capacity; the auditorium was filled to capacity

cent symbol: equal to one hundredth of the base currency unit; the symbol is ¢

compare: tells how two or more things are alike

compose: to compose shapes is to join geometric shapes without overlaps to form new shapes

cone: a 3-dimensional figure with one curved surface, one flat surface, one curved edge, and one vertex

counting: to find how many of something there are

counting forward: a strategy for finding the number of objects in a group without having to count every member of the group

counting number: a number used in counting objects, i.e., a number from the set $\{1, 2, 3, 4, 5, \dots\}$

create: to make

cube: the regular solid of six equal square sides

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

D

data: a collection of information

decompose: given a number, identify pairs, triples, etc. of numbers that combine to form the given number

digital: having to do with data that is represented in the form of numerical digits; providing readout in numerical digits, e.g., a digital watch

dime: smaller silver coin worth ten cents

E

equal groupings: two or more groups having equal sets

equal parts: parts being of the same size and shape

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

equation: a number sentence that uses the equal sign ($1 + 2 = 3$)

extend: to make bigger; to add to original

F

fact families: related number sentences for addition and subtraction that contains all the same numbers e.g., $2 + 3 = 5$, $3 + 2 = 5$, $5 - 3 = 2$, $5 - 2 = 3$

fair share: sharing objects equally

fives: a cardinal number, the next number after four, counting by 5's, e.g., 5, 10, 15, 20, ...

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

full hour: sixty whole minutes

H

half hour: thirty whole minutes

hexagon: a polygon with six sides

hour: sixty whole minutes

I

identify: recognize and name

illustrate: to draw a picture

L

length: distance from one end to the other

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

linear measurement: measurement along a line

M

manipulatives: concrete materials (e.g., buttons, beans, egg and milk cartons, counters, attribute and pattern blocks, interlocking cubes, base-10 blocks, geometric models, geo-boards, fraction pieces, rulers, balances, spinners, dot paper) used to represent mathematical concepts, operations, and relationships

measure: use of standard units to find out size or quantity in regard to: length, breath, height, area, mass, weight, volume, capacity, temperature and time

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

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

N

nickel: thicker silver coin worth five cents

nonstandard units: any unit or item that isn't a standard metric or customary unit which can be used to measure something

number line: a line in which numbers are marked

numbers: numbers describe quantities or values

numeral: a symbol or mark used to represent a number

O

ones place: one place to the left of the decimal point

ones: a cardinal number, the next number after zero

open number line: a line without marks or numbers

order: an arrangement of a set group of objects

P

parallel: equidistant, that is, the same distance apart, never touching

partition polygon: a process of dividing a polygon into parts or a set into smaller subsets

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

penny: small copper brown coin worth one cent

picture graph: a graph that uses pictures to show quantities

pictures: a picture or drawing that represents a person or thing

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

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

position: the comparison of where something is related to another object or its surroundings

Q

quadrilateral: a four-sided figure having four straight sides

quantity: amount, number of, total, sum, size or extent: how much or how many

quarter: bigger coin worth twenty-five cents

R

regular polygon: regular polygons have all sides equal and all angles equal.

relative size: the size of an object when compared to another object

S

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

solve: solving an equation involves finding numerical values for all the variables that make the equation true

sphere: a three-dimensional solid that is perfectly round, a ball

standard units: there are two main groups of standardized units: the metric system and US customary measures

subtraction facts: an equation that finds the difference between two numbers

subtraction: the process of finding the difference between two numbers

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

T

table: mathematical information organized in columns and rows

tally marks or tallies: a record of an amount

- using tally marks to record counting,
- count by 5's to get the total, for example,
- $\text{||||} \text{||||} \text{||} = 13$; a mark that represents each item; the marks are made where four lines in close distance are then crossed for the fifth item

ten less: subtracting 1 in the tens

ten more: adding 1 to the tens digit in a number

ten: a cardinal number, the next number after nine

tens place: two places to the left of the decimal point

three-dimensional shapes: having three dimensions of length, width (or breadth) and height

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

trapezoid: a quadrilateral only having two sides that are parallel

two-dimensional shapes: existing in 2 dimensions (2D); having length, width, and height

U

unit: a determinate quantity (as of length, time, heat, or value) adopted as a standard of measurement

V

value: the numerical worth or amount

Venn diagram: data display typically using circles, to show the relationship between sets

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

W

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

