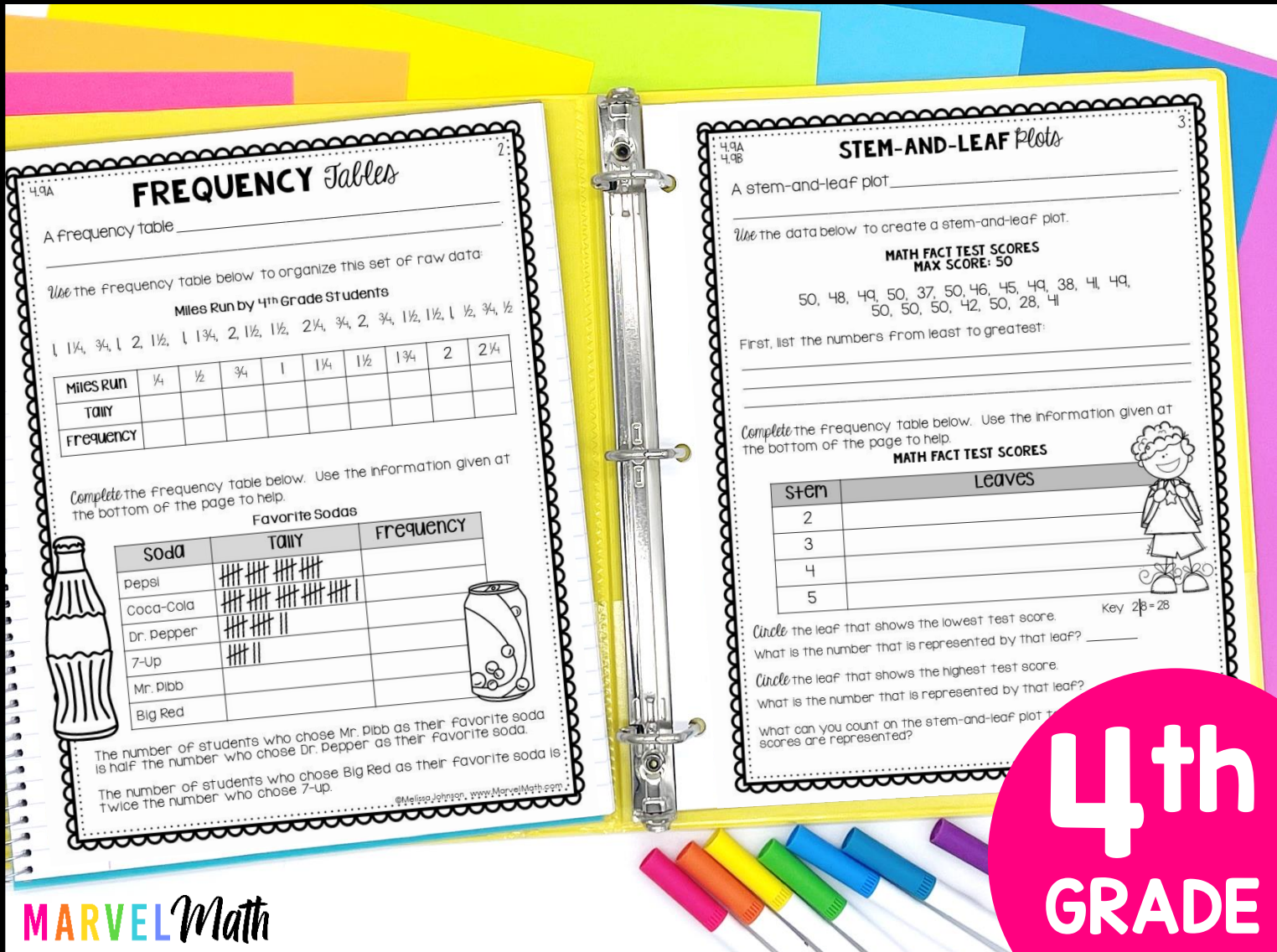


Data & Graphing Notebook



Teaches These Graphing & Data Topics

- Frequency Tables
 - Dot Plots
 - Stem-and-Leaf Plots
- Data with
- Whole Numbers
 - Fractions
 - Decimals

MARVEL Math

COMPOSITION BOOK

100 Sheets
9 3/4 x 7 1/2 in / 24.7 x 19 cm

4.9A
4.9B

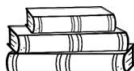
DOT Plots

A dot plot _____

Use the data below to create a dot plot.

NUMBER OF MINUTES SPENT READING LAST NIGHT

Minutes of Reading	15	16	17	18	19	20	21	22	23	24	25
Number of Students	1	0	0	1	2	7	5	6	1	0	3



NUMBER OF MINUTES SPENT READING LAST NIGHT



How many students read 20 or more minutes last night?

How many total minutes were spent reading by the 10 students who read the most last night?



No Cutting or Gluing

Just Print and Learn.

Stem-And-Leaf Plots with *Decimals*

Sometimes the stems are _____ and the leaves are _____. If a number doesn't have a digit in the tenths place, you can _____.

Use the data below to create a stem-and-leaf plot.

Pencil Lengths in cm

4.5, 4, 5.8, 5.2, 6.7, 4.8, 5.5, 6, 5, 4.4, 6, 5.9, 7, 5.8, 7, 7.1

First, list the numbers from least to greatest:

Complete the frequency table below. Use the information given at the bottom of the page to help.

Stem	Leaves
4	
5	
6	
7	

Circle the leaf that shows the shortest pencil length. Key $2|8 = 2.8$

What is the number that is represented by that leaf? _____

Circle the leaf that shows the greatest pencil length.

What is the number that is represented by that leaf? _____

What is the difference between the shortest and longest pencil?

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STEM-AND-LEAF PLOTS with *Fraction*

Sometimes the stems are _____ and the leaves are _____. To show a whole number that doesn't have a fraction, make a leaf with a numerator of 0.

Use the Frequency Table below to create a stem-and-leaf plot.

MILES RUN BY 4TH GRADE STUDENTS

1, 2 $\frac{1}{4}$, $\frac{3}{4}$, 1, 1 $\frac{1}{2}$, 1, 1 $\frac{3}{4}$, 2, 1 $\frac{1}{2}$, 1 $\frac{1}{2}$, $\frac{3}{4}$, 2, $\frac{3}{4}$, 1 $\frac{1}{2}$, 1 $\frac{3}{4}$, 1

Miles Run	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	2
Tally								
Frequency								

Complete the Frequency Table below. Use the information given at the bottom of the page to help.

MILES RUN BY 4TH GRADE STUDENTS

Stem	Leaves
0	
1	
2	

Circle the leaf that shows the least number of miles run. What is the number that is represented by that leaf?

Circle the leaf that shows the greatest number of miles run. What is the number that is represented by that leaf?

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Easy-to-Use

Student Pages

4.9A
4.9B

DOT PLOTS with Fractions

A dot plot _____

Use the data below to create a dot plot.

POUNDS OF MEAT PURCHASED

Pounds of Meat	0	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$
Number of Customers	0	2	3	0	4	5	7	0	4	0

POUNDS OF MEAT PURCHASED

How many people purchased $2\frac{1}{2}$ lbs. of meat?

What is the difference between the number of people who purchased more than 2 lbs. of meat and the number of people who purchased 2 lbs. of meat or less?

Challenge: How many pounds of meat were sold in all?

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4.9A

FREQUENCY Tables

A frequency table _____

Use the Frequency Table below to organize this set of raw data:

Miles Run by 4th Grade Students

1 $\frac{1}{4}$, $\frac{3}{4}$, 1, 2, $1\frac{1}{2}$, 1 $1\frac{3}{4}$, 2, $1\frac{1}{2}$, $1\frac{1}{2}$, $2\frac{1}{4}$, $\frac{3}{4}$, 2, $\frac{3}{4}$, $1\frac{1}{2}$, $1\frac{1}{2}$, 1, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{2}$

Miles Run	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2	$2\frac{1}{4}$
Tally									
Frequency									

Complete the Frequency table below. Use the information given at the bottom of the page to help.

Favorite Sodas

Soda	Tally	Frequency
Pepsi		
Coca-Cola		
Dr. Pepper		
7-Up		
Mr. Pibb		
Big Red		

The number of students who chose Mr. Pibb as their favorite soda is half the number who chose Dr. Pepper as their favorite soda.

The number of students who chose Big Red as their favorite soda is twice the number who chose 7-up.

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Math Lessons Made Easy

Use for Whole Group or Guided
Math Small Group Lessons!

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4.9A
4.9B

STEM-AND-LEAF Plots

3

A stem-and-leaf plot _____

Use the data below to create a stem-and-leaf plot.

MATH FACT TEST SCORES MAX SCORE: 50

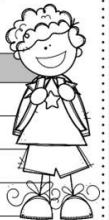
50, 48, 49, 50, 37, 50, 46, 45, 49, 38, 41, 49,
50, 50, 50, 42, 50, 28, 41

First, list the numbers from least to greatest:

Complete the Frequency table below. Use the information given at the bottom of the page to help.

MATH FACT TEST SCORES

Stem	Leaves
2	
3	
4	
5	



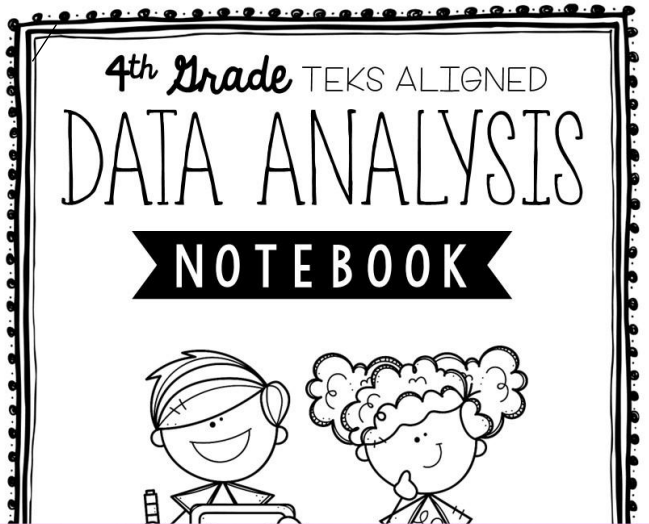
Circle the leaf that shows the lowest test score. Key $2|8 = 28$
What is the number that is represented by that leaf? _____

Circle the leaf that shows the highest test score.
What is the number that is represented by that leaf? _____

What can you count on the stem-and-leaf plot to tell you how many scores are represented?

No Cutting or Gluing Required

- Make stapled packets
- 3-hole punch to use in a binder
- Make the most of class time

A blue binder is shown with a pink folder tucked inside. The folder holds a worksheet titled "STEM-AND-LEAF Plots". The worksheet has a decorative border and includes a page number "3" in the top right corner. It contains instructions for creating a stem-and-leaf plot using "MATH FACT TEST SCORES". The scores listed are 50, 48, 49, 50, 37, 50, 46, 45, 49, 38, 41, 49, 50, 50, 50, 42, 50, 28, 41. The worksheet includes a table for the stem-and-leaf plot with columns for "Stem" and "Leaves". The stems are 2, 3, 4, and 5. To the right of the table is a cartoon drawing of a girl. Below the table, there are questions about the plot, such as "Circle the leaf that shows the lowest test score." and "What is the number that is represented by that leaf?". A key at the bottom right says "Key 2|3 = 28". The footer of the worksheet includes the copyright information "©Melissa Johnson www.MarvellMath.com".

Essential Vocabulary

Easy-to-Use Student Reference Tool

MARVELMath

ESSENTIAL DATA ANALYSIS VOCABULARY

Term	Picture or Example	Definition									
Frequency Table Go around the class one student at a time while students tell if they have a cat or dog. Put a tally for each student and then find the frequency.	<table border="1"><thead><tr><th>Pet</th><th>TALLY</th><th>FREQUENCY</th></tr></thead><tbody><tr><td>Cat</td><td></td><td></td></tr><tr><td>Dog</td><td></td><td></td></tr></tbody></table>	Pet	TALLY	FREQUENCY	Cat			Dog			A frequency table organizes raw data to show the number of times each value occurs.
Pet	TALLY	FREQUENCY									
Cat											
Dog											
Data	Examples: Data set 1: Cat, Dog, Dog, Cat, Cat Data set 2: 4.5, 7.2, 6.3	Data is information and it is often times a number.									
Dot Plot	Number of Laps Run 3 4 5	A dot plot is a graph that shows the dispersal of data.									
Stem & Leaf Plot	Estimation Jar Guesses <table border="1"><thead><tr><th>Stem</th><th>Leaf</th></tr></thead><tbody><tr><td>5</td><td>2 2 6</td></tr><tr><td>6</td><td>1 3 4 8 8</td></tr><tr><td>7</td><td>3 4</td></tr></tbody></table> Key: 5 2 = 52	Stem	Leaf	5	2 2 6	6	1 3 4 8 8	7	3 4	A stem-and-leaf plot is a graph that organizes data based on place value.	
Stem	Leaf										
5	2 2 6										
6	1 3 4 8 8										
7	3 4										
Stems & Leaves	For 68, the 6 becomes the stem and the 8 becomes the leaf. The key tells you how to split up data values.	Each data value is split into a stem and a leaf in a stem-and-leaf plot.									

ESSENTIAL DATA ANALYSIS VOCABULARY

Term	Picture or Example									
Frequency Table	<table><tr><th>Pct</th><th>TALLY</th><th>FREQUENCY</th></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	Pct	TALLY	FREQUENCY						
Pct	TALLY	FREQUENCY								
Data										
Dot Plot	Number of Laps Run 3 4 5									
Stem & Leaf Plot	Estimation Jar Guesses <table><tr><th>Stem</th><th>Leaf</th></tr><tr><td>5</td><td>2 2 6</td></tr><tr><td>6</td><td>1 3 4 8 8</td></tr><tr><td>7</td><td>3 4</td></tr></table> Key: 5 2 = 52	Stem	Leaf	5	2 2 6	6	1 3 4 8 8	7	3 4	
Stem	Leaf									
5	2 2 6									
6	1 3 4 8 8									
7	3 4									
Stems & Leaves										

Built for the TEKS

DATA ANALYSIS Table of Contents

TOPIC	TEKS	page(s)
Data Analysis Vocabulary	4.9, 4.9B	1
Frequency Tables	4.9A	2
Stem-and-Leaf Plots	4.9A, 4.9B	3
Stem-and-Leaf Plots with Decimals	4.9A, 4.9B	4
Stem-and-Leaf Plots with Fractions	4.9A, 4.9B	5
Dot Plots	4.9A, 4.9B	6
Dot Plots with Fractions	4.9A, 4.9B	7

Resource Includes



9 Student Pages



**Pages to introduce 4th
Grade Standards for
Graphing and Data**



Teacher KEY



**Essential Vocabulary
for the topic**



About the Author

This resource was created by Melissa Johnson, who has 16 years of k-10 teaching experience and a masters degree in Mathematics Education. Her resources build conceptual understanding, make connections between math topics and engage students in the mathematics they are learning.

