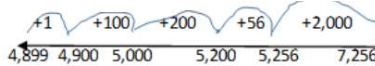
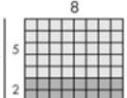
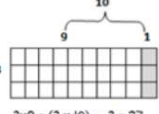
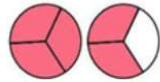
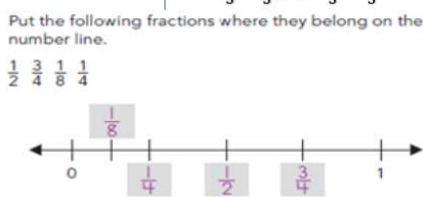
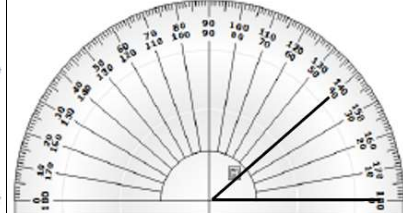


4th Grade Math Parent Guide

	1 st Grading Period	2 nd Grading Period	3 rd Grading Period	4 th Grading Period
Units/TEKS Process Standards 4.1ABCDEFGH through every unit TEKS	Unit 5: Place Value, Rounding, Addition, Subtraction Larger Numbers 4.9AB, 4.2ABCEFGH, 4.4AG, 4.5ACD	Unit 3 and Unit 8: Multiplication, Division, Area and Perimeter, Graphs and Data 4.4BCDEFGH, 4.5CD, 4.9AB	Unit 6 and Unit 4: Fractions and Decimals, Geometry (2D figures, symmetry, and angles), Area and Perimeter 4.2G, 4.3ABCEFG, 4.6ABCD, 4.7ABCDE	Area and Perimeter, Measurement Conversions, Data, Personal Financial Literacy, STAAR Review 4.5CD, 4.8ABC, 4.9AB, 4.10ABCDE, 4.4A
Topic Focus	Unit 5: This unit extends the students' knowledge of the number system to 10,000; adding and subtracting accurately and efficiently; describing, analyzing, and comparing strategies for addition and subtraction; and understanding different types of subtraction problems.	Unit 3: This unit's mathematical focus is on solving multiplication problems with 2-digit numbers, understanding, and using the relationship between multiplication and division to solve division problems, reasoning about numbers and their factors, and representing the meaning of multiplication and division. Unit 8: This unit focuses on solving multiplication problems with 2-digit numbers and understanding division as making groups of the divisor.	Unit 6: This unit focuses on the understanding and use of fractions and decimals and how they relate to whole numbers. Unit 4: These units develop ideas about the attributes of 2-D and 3-D shapes, and how these attributes determine their classification. They also develop ideas about linear measurement (perimeter), area, and the measurement of angles.	Measurement: This unit's mathematical focus is on identifying relative sizes of measurement, measurement conversions, and solving problems that deal with measurements.
Suggestions for Parental Involvement /Support	<p>Strategy 1: Adding One Number in Parts Students begin with one of the addends and add up using numerical relationships such as tens and ones, make ten facts, or landmark numbers.</p> <p>2,357 + 4,899</p> <p>Using a number line:</p>  <p>Or using equations: $2,357 + 4,000 = 6,357$ $6,357 + 700 + 100 = 7,157$ $7,157 + 50 + 40 = 7,247$ $7,247 + 3 + 6 = 7,256$</p> <p>Strategy 2: Traditional Algorithm In this strategy, students line numbers up by place value and add them from right to left. Regrouping is an area that many students struggle with in this strategy.</p> $\begin{array}{r} 2,357 \\ + 4,899 \\ \hline 7,256 \end{array}$	<p>Fact Fluency: In the first unit, students will be working to become fluent with their multiplication facts. Students are encouraged to use the commutative property (6×8 has the same product as 8×6) to have less facts to memorize. Students will also be identifying strategies to help them find the product of a fact they have not memorized yet by thinking about decomposing facts and using compensation.</p> <p>Decomposing Facts</p>  <p>$7 \times 8 = (8 \times 5) + (8 \times 2)$ $7 \times 8 = 40 + 16$ $7 \times 8 = 56$</p> <p>Compensation</p>  <p>3×10 is a fact I know. If I start with 3×10, I can just subtract one group of three to get the answer to 3×9.</p>	<p>Fractional Representations: Students will be expected to read and write proper and improper fractions. One way to determine the name of the fraction is to count the fractional parts.</p>  <p>Think: $\frac{1}{3}, \frac{2}{3}, \frac{3}{3}, \frac{4}{3}, \frac{5}{3}$ Or $\frac{1}{3}, \frac{2}{3}, 1, 1\frac{1}{3}, 1\frac{2}{3}$</p> <p>Put the following fractions where they belong on the number line.</p>  <p>The number line is an important model because it illustrates not just individual fractions but shows the relationships among them. For example, we can see that $\frac{1}{4}$ is half of $\frac{1}{2}$ and that $\frac{1}{8}$ is half of $\frac{1}{4}$ by looking at this number line. Students can also</p>	<p>Measuring with a Protractor</p> <p>Place the center point of the protractor over the center point of the angle. Match the 0° line of the protractor along one side of the angle. Then read where the other side of the angle crosses the edge of the protractor to find the angle measurement.</p>  <p>There are two numbers on the protractor, 40° and 140°. I know that the measurement cannot be 140° because I estimate that this angle is less than 90°. 140 is not less than 90. This angle measurement must be 40°.</p> <p>Finding Missing Angles</p> <p>Find the measure of $\angle BDC$. Explain your reasoning.</p>

Strategy 3: Compensation The goal of this strategy is to decompose the numbers into easier, friendly numbers. When compensating, remove a specific amount from one addend and give it to the other addend. Choosing which number to adjust is an important decision that is linked to students' number sense.

$$2,357 + 4,899$$

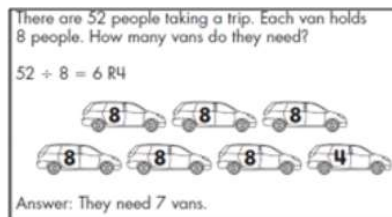
$$(2,357 - 101) + (4,899 + 101)$$

$$2,256 + 5,000 = 7,256$$

Think: 4,899 is not easy to add. So I'm going to take from one number & give it to the other so it's easier.

Division with and without Remainders Students will use what they know about multiplication to help them solve division problems. This connection can be seen when division and multiplication situations are presented simultaneously in story contexts. The story contexts help students make sense of the problem and interpret what the remainder really means in the context of the story.

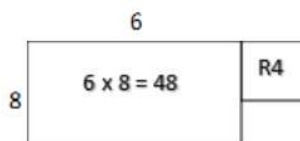
Show your thinking using pictures:



Or using equations:

$8 \times 6 = 48$ with 4 people in the last van
We will need 7 vans for all the people.

Or using arrays



consider how benchmark fractions can be useful when comparing or adding/subtracting fractions.

Example:

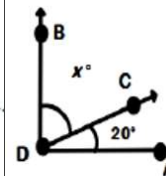
Use the $<$, $>$, $=$ symbol to compare these fractions.

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

Anna described her thinking like this: I know one-fourth is less than one-half and two-thirds is greater than one-half. Two-thirds has to be bigger because it is the only one bigger than one half.

How can I support my child's learning?

- Allow your child to measure ingredients while cooking. Help your child to understand relationships such as one-fourth + one-fourth = one-half.
- Allow your child to use a measuring tape when building things at home. Discuss how each line on the tape represents a fraction of the next inch.



$\angle BDA$ is a 90° angle. If $\angle CDA$ is 20° , then I can find $\angle BDC$ by subtracting 90 and 20.
 $\angle BDC$ is 70°

General Resources

Math 4 Texas: <https://www.math4texas.org/>

Graham Fletcher Progression Videos: <https://gfletchy.com/progression-videos/>

Interactive Math Glossary: <https://www.texasgateway.org/resource/interactive-math-glossary>

ST Math: sso.ems-isd.net

Khan Academy: <https://www.khanacademy.org/math>