

In an effort to keep parents and guardians informed of the expectations and content being covered in math class this year, this informational handout will be provided for each chapter. Its intent is to assist in guiding you in ways to support your child in deepening their mathematical understanding.



Scan the QR code to check out teaching strategies for this chapter.

In each chapter we will spend time reviewing material taught in prior grades as it relates to the standards being taught in fourth grade. Our goal is to keep a balance of skill based learning along with enhancing our student’s ability to problem solve and think conceptually.

Review Material from Prior Grades
<ol style="list-style-type: none"> 1) Round whole numbers to the nearest 10 or 100. (3.NBT.1) 2) Fluently add and subtract within 1,000. (3.NBT.2) 3) Arithmetic patterns (like those in addition and/or multiplication tables), and explain them using the properties of operations. (3.OA.9)
New Material for 4 th Grade
<ol style="list-style-type: none"> 1) I can round multi-digit whole numbers to any place using place value. (4.NBT.3) 2) I can fluently add and subtract at least four-digit numbers with sums and differences less than or equal to 1,000,000. (4.NBT.4) 3) I can solve multi-step word problems using addition and subtraction. (4.OA.3) 4) I can generate a number pattern using addition, subtraction, and place value (e.g., 10 more/less, 100 more/less, 1,000 more/less). (4.OA.5)
End of Chapter Expectations
<ol style="list-style-type: none"> 1) Chapter Assessment

*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.

Addition and Subtraction Strategies

Number Bond

Shows the relationship between addition and subtraction as “part-part-whole”.

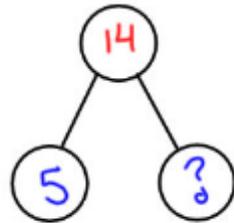
Example:

$$14 - 5 = 9$$

$$14 - 9 = 5$$

$$5 + 9 = 14$$

$$9 + 5 = 14$$



$$14 - 5 = ? \quad 5 + ? = 14$$

☺ **Family Practice** ☺

Check out some of these free, math websites to practice addition and subtraction skills.

- 1) <http://gregtangmath.com/>
- 2) http://www.thinkingblocks.com/ThinkingBlocks_AS/TB_AS_Main.html

Open Number Line- Addition (Mental Math)

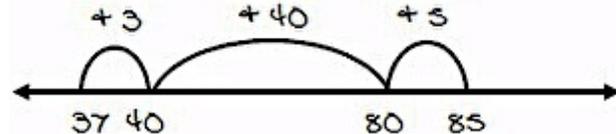
Example: $37 + 48 =$

Step 1: Take 3 of the 8 ones from the second number to make a ten out of the 37 ($37 + 3 = 40$).

Step 2: Move on the 4 tens to get to 80.

Step 3: Add the remaining 5 ones.

Step 4: The sum of 37 and 48 is 85.

**Open Number Line- Subtraction (Mental Math)**

Onary

Example: $517 - 392 =$

This method looks like adding, because it starts with the smaller number and then counts on to the bigger number to find the difference between the two numbers.

You then add up all the jumps you have made on the top: $8 + 100 + 17 = 125$

The difference between 392 and 517 is 125.



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Addition and Subtraction Strategies, Continued

Traditional Algorithm

Addition (with regrouping)

Step 1 Add ones.

$$\begin{array}{r} 1 \\ 6,824 \\ + 349 \\ \hline 3 \end{array}$$

← $4 + 9 = 13$
Regroup 13 ones as 1 ten and 3 ones.

Step 2 Add tens.

$$\begin{array}{r} 1 \\ 6,824 \\ + 349 \\ \hline 73 \end{array}$$

← $1 + 2 + 4 = 7$

Step 3 Add hundreds.

$$\begin{array}{r} 1 \quad 1 \\ 6,824 \\ + 349 \\ \hline 173 \end{array}$$

← $8 + 3 = 11$
Regroup 11 hundreds as 1 thousand and 1 hundred.

Step 4 Add thousands.

$$\begin{array}{r} 1 \quad 1 \\ 6,824 \\ + 349 \\ \hline 7,173 \end{array}$$

← $6 + 1 = 7$

Subtraction (with regrouping)

Step 1 Subtract ones.

$$\begin{array}{r} 0 \quad 14 \\ 3,214 \\ - 957 \\ \hline 7 \end{array}$$

← Regroup a ten as 10 ones.

Step 2 Subtract tens.

$$\begin{array}{r} 10 \\ 1 \quad 0 \quad 14 \\ 3,214 \\ - 957 \\ \hline 57 \end{array}$$

← Regroup a hundred as 10 tens.

Step 3 Subtract hundreds.

$$\begin{array}{r} 11 \quad 10 \\ 2 \quad 1 \quad 0 \quad 14 \\ 3,214 \\ - 957 \\ \hline 257 \end{array}$$

← Regroup a thousand as 10 hundreds.

Step 4 Subtract thousands.

$$\begin{array}{r} 11 \quad 10 \\ 2 \quad 1 \quad 0 \quad 14 \\ 3,214 \\ - 957 \\ \hline 2,257 \end{array}$$

So, the Trevino family needs to drive 2,257 more miles.

Check You can use addition to check your subtraction.

$$\begin{array}{r} 3,214 \\ - 957 \\ \hline 2,257 \end{array} \quad \begin{array}{r} 2,257 \\ + 957 \\ \hline 3,214 \checkmark \end{array}$$

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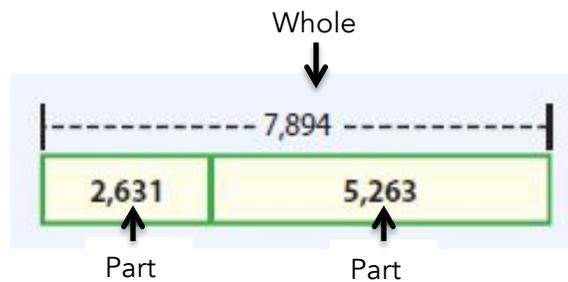
Addition and Subtraction Strategies, Continued

Subtraction Across Zeros

<p>Step 1 Subtract ones.</p> $\begin{array}{r} 99 \\ 4101014 \\ \$5,804 \\ - \$2,815 \\ \hline 9 \end{array}$	<p>Regroup 1 thousand as 10 hundreds. Regroup 1 hundred as 10 tens. Regroup 1 ten as 10 ones. $14 - 9 = 5$</p>	<p>Step 3 Subtract hundreds.</p> $\begin{array}{r} 99 \\ 4101014 \\ \$5,804 \\ - \$2,815 \\ \hline 189 \end{array}$
<p>Step 2 Subtract tens.</p> $\begin{array}{r} 99 \\ 4101014 \\ \$5,804 \\ - \$2,815 \\ \hline 89 \end{array}$	<p>$9 - 8 = 1$</p>	<p>Step 4 Subtract thousands.</p> $\begin{array}{r} 99 \\ 4101014 \\ \$5,804 \\ - \$2,815 \\ \hline \$2,189 \end{array}$

Solve Word Problems With Model Drawing (using bar units)

There are 7,894 trees in Grant Park. 2,631 of them are pine trees. How many are not pine trees?



There are 5,263 trees in Grant Park that are not pine trees.

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