



Dear Parents,

Over the next several weeks, we will be learning about **addition** and **subtraction** in math! The information below will help you to support your child as they learn these exciting, yet important third grade math skills.

The GOAL:

By the end of the unit, your child should be able to **apply properties of addition to add two- and three-digit whole numbers**. They should also be able to **subtract two- and three- digit whole numbers from three-digit whole numbers**.

Addition Properties

In math, students will learn what an **addend** is. An **addend** is a number that is added to another number.

Identity Property of Addition states that any addend plus zero will equal the same number. (The number will keep its identity)

$$12 + 0 = 12$$

Commutative Property of Addition states the order of addends does not matter.

$$7 + 8 = 15 \text{ is the same as } 8 + 7 = 15$$

Associative Property of Addition states you can group addends in any order. This property is used when there are three or more addends.

$$\begin{aligned} (2 + 3) + 4 &= 9 \\ 2 + (3 + 4) &= 9 \\ (2 + 4) + 3 &= 9 \end{aligned}$$

→ This example uses the Commutative Property first to change the order of the addends!

Multi-Digit Addition & Subtraction

| | |
|---|---|
| $\begin{array}{r} 206 \\ + 112 \\ \hline 318 \end{array}$ | $\begin{array}{r} 1 \\ 318 \\ + 34 \\ \hline 352 \end{array}$ |
| Without regrouping | With regrouping |

| | |
|---|---|
| $\begin{array}{r} 356 \\ - 125 \\ \hline 231 \end{array}$ | $\begin{array}{r} 510 \\ 4\cancel{0}0 \\ - 237 \\ \hline 223 \end{array}$ |
| Without regrouping | With regrouping |

Regrouping Challenge:

| | | |
|--|---|---|
| $\begin{array}{r} 2000 \\ - 368 \\ \hline \end{array}$ | → | $\begin{array}{r} 19910 \\ \cancel{2000} \\ - 368 \\ \hline 1632 \end{array}$ |
|--|---|---|



Grade 3 Math: PA Core Math Standards in Unit 1

CC.2.1.3.B.1: Apply place-value understanding and properties of operations to perform multi-digit arithmetic.

-- HOW TO HELP AT HOME --

- Look for opportunities to practice mental math.
- Encourage children to skip count by different amounts. (Start with easier increments like 2s, 5s, and 10s, and then work towards harder increments like 3s, 4s, and 6s.)
- Talk about different ways to regroup different amounts. For example, a dozen eggs can be grouped in 2s, 3s, 4s, and 6s. Look for ways to group other everyday objects!
- At the store, compare prices and see how much you can save.
- Play math games that develop fact fluency (accuracy and speed).

-- KEY MATH VOCABULARY --

Difference: The answer to a **subtraction** problem.

Fact Family: A set of related addition and subtraction equations.

Number Sentence: A complete equation, containing an equal sign (=) and operation sign (+, -).

Sum: The answer to an **addition** problem.

Whole Number: A counting number (1, 2, 3, ...) or zero.

