

Computation Study Guide

Vocabulary

- **Addition** – taking two numbers and combining them together
- **Addend** – the numbers that you are adding together
- **Sum** – the answer to an addition problem
- **Subtraction** – part of an amount taken away from a whole amount
- **Difference** – the answer to a subtraction problem
- **Compute** – solving an addition or subtraction problem

Properties of Addition

- **Associative (grouping) Property** – no matter how numbers are grouped, the same addends grouped different ways will always equal the same sum.
Example: $(3 + 6) + 1 = 10$ and $3 + (6 + 1) = 10$
- **Commutative (ordering) Property** – no matter what order numbers are added in, the same addends will always have the same sum
Example: $5 + 4 = 9$ and $4 + 5 = 9$
- **Identity(zero) Property** – any number plus zero will always be the same number
Example: $4 + 0 = 4$ and $0 + 6 = 6$

Fact Families

$$3 + 2 = 5$$

$$2 + 3 = 5$$

$$5 - 3 = 2$$

$$5 - 2 = 3$$

Rounding and Estimation

Students are expected to be able to round to the nearest ten, hundred, and thousand to estimate numbers.

Estimate to the nearest 10:

$$36 + 46$$

$$\mathbf{40 + 50 = 90}$$

$$982 + 756$$

$$\mathbf{980 + 760 = 1740}$$

Estimate to the nearest 100:

$$789 + 546$$

$$\mathbf{800 + 500 = 1,300}$$

$$9,087 + 4,874$$

$$\mathbf{9,100 + 4,900 = 1,400}$$



Computation Study Guide

In and Out Boxes

Students are expected to be able to finish an in and out table and determine the rule of the table.

2	6	7	18	9
10	14	15	26	17

Rule: + 8

Computation

Students should be able to add and subtract numbers with up to 4 digits with and without regrouping.

$$\begin{array}{r} | \\ 87 \\ +16 \\ \hline 103 \end{array}$$

$$\begin{array}{r} 93 \\ -22 \\ \hline 71 \end{array}$$

$$\begin{array}{r} 9 \\ 31\cancel{0}13 \\ 403 \\ -235 \\ \hline 169 \end{array}$$

$$\begin{array}{r} 132 \\ +254 \\ \hline 386 \end{array}$$

$$\begin{array}{r} 13 \\ 1\cancel{3}15 \\ 245 \\ -78 \\ \hline 167 \end{array}$$

$$\begin{array}{r} | \\ 5,625 \\ +2,365 \\ \hline 7,990 \end{array}$$

$$\begin{array}{r} 515 \\ 4,659 \\ -1,594 \\ \hline 3,065 \end{array}$$

*Make sure when subtracting across the zero that you do the work step by step asking yourself, "Does This make sense? Now what am I trying to do?"

** Please remember you can use addition to check subtraction problems!!!!

