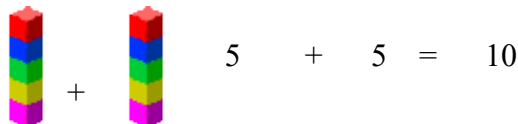


Third Grade Strategies – Addition and Subtraction

Strategies the students will be using will vary depending on the size of the number. The focus is on grouping numbers and not counting by ones.

Using manipulatives or pictures to help count and keep track of adding and subtracting situations.



Counting On or Counting Back $11 + 12 =$

Starting at either the smaller number or the larger number using a 100 chart, number line or mental math. Some will count by ones and others will count by 10's (going to 21 and counting 2 more).

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |

“Down ten and two more.” Students are encouraged to eventually visualize this chart once they have had enough practice with it.

Mental Strategies and ways to record or keep track: Knowing the combinations to 10 is important for the following strategies. Students will develop different strategies for different problems. Students do not use borrowing and carrying; instead they look at the whole number and work with place value.

Counting Up:

$$\begin{aligned} 52 - 37 &= \\ + 3 \text{ (to get to 40)} & \\ + 12 \text{ (to get to 52)} & \\ = 15 & \end{aligned}$$

OR

$$\begin{aligned} 52 + 39 &= \\ + 30 \text{ (adding tens)} & \\ + 9 \text{ (adding ones – some students will break the 9 into 8 and 1)} & \\ 52 + 30 = 82 & \\ 82 + 8 = 90, 90 + 1 = 91 & \end{aligned}$$

Left to Right:

$$\begin{aligned} 27 + 27 &= \\ 20 + 20 &= 40 \\ 7 + 7 &= 14 \\ 40 + 14 &= 54 \end{aligned}$$

OR

$$\begin{aligned} 81 - 27 &= \\ 80 - 20 &= 60 \\ 1 - 7 &= -6 \\ 60 - 6 &= 54 \quad \{\text{or } 60 + (-6) = 54\} \end{aligned}$$

Landmarks (there are many ways to use landmarks) here are just a few examples:

$$\begin{aligned} 27 + 27 &= \\ 30 + 30 &= 60 \\ 60 - 6 &= 54 \end{aligned}$$

(added too much so need to take away)

OR

$$\begin{aligned} 81 - 27 &= \\ 81 - 30 &= 51 \\ 51 + 3 &= 54 \end{aligned}$$

(subtracted too much so need to add back)

OR

$$\begin{aligned} 81 - 27 &= \\ 84 - 30 &= \quad (+3 \text{ to each}) \\ = 54 & \\ \text{(add the same amount to both numbers)} & \end{aligned}$$

$$\begin{aligned} 234 + 139 &= \\ 234 + 140 &= \\ 200 + 100 + 34 + 40 &= 374 \\ 374 - 1 &= 373 \end{aligned}$$

$$\begin{aligned} 121 - 47^* &= \\ +53 \text{ (to get to 100)} & \\ + 21 \text{ (to get to 121)} & \\ 53 + 21 &= 74 \end{aligned}$$

$$\begin{aligned} 121 - 53 &= \\ + 7 \text{ to } 53 \text{ and } 121 & \\ 128 - 60 &= \\ 120 - 60 = 60, 8 - 0 = 8 & \\ 60 + 8 &= 68 \end{aligned}$$

Third Grade Computation Expectations: Fluent with number combinations to 10 + 10; strategies for combinations to 100.