

2nd Grade Unit 4

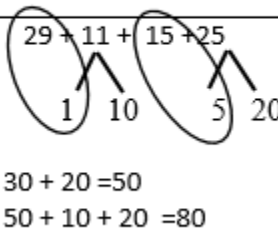
Volume 4

3rd 9 Weeks

Unit 4 Goals:

- Add up to four two-digit numbers.
- Mentally adds or subtracts 10 or 100 to a given number 100-900.
- Add and subtract within 1000 using concrete models or drawing and strategies.
- Explain why addition and subtraction strategies work.
- Solve word problems involving money.
- Organize, represent, and interpret data.

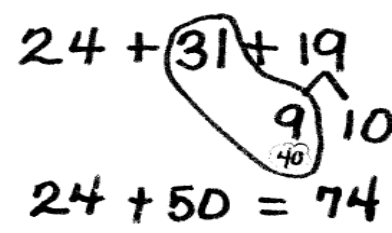
Maya bought an outfit for \$29, a book bag for \$15, a binder for \$11, and a pair of shoes for \$25. How much did Maya spend?

Student 1	Student 2
$29 + 15 + 11 + 25$ $29 + 11 = 40$ $15 + 25 = 40$ $40 + 40 = 80$	 $29 + 11 + 15 + 25$ $30 + 20 = 50$ $50 + 10 + 20 = 80$

Addition Strategies

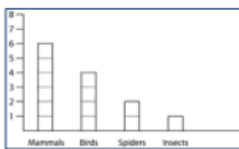
Breaking Apart by Place Value	Keeping One Number Whole
$321 + 135 =$ $300 + 100 = 400$ $20 + 30 = 50$ $1 + 5 = 6$ $400 + 50 + 6 = 456$	$321 + 135 =$ $321 + 100 = 421$ $421 + 30 = 451$ $451 + 5 = 456$

Make 10 Strategy

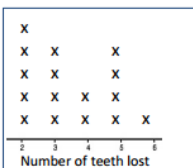

 $24 + 31 + 19$

 $24 + 50 = 74$

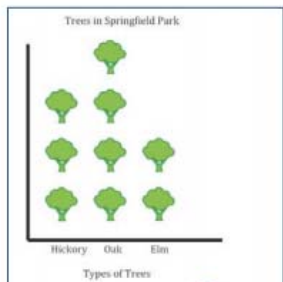
Types of graphs:



Bar Graph



Line Plot



Picture Graph

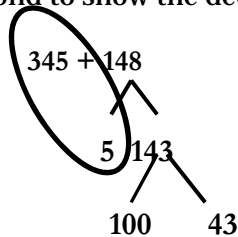
Subtraction Strategies

Adding Up	Keeping One Number Whole
$456 - 234 =$ $234 + 200 = 434$ $434 + 20 = 454$ $454 + 2 = 456$ $200 + 20 + 2 = 222$	$456 - 234 =$ $456 - 200 = 256$ $256 - 30 = 226$ $226 - 4 = 222$

Below are examples of some of the strategies and written methods students may use to solve $345 + 148$.

Students may use the Make Ten Strategy to get started solving this problem.

One of the possible ways to show using the make ten strategy is to show how one of the numbers should be decomposed in order to make a ten. Below a student has used a number bond to show the decomposition of 148.



The student combines 345 and 5 to make 350.
 $345 + 5 = 350$.

Next, the student decomposes the 143 into 100 and 43.
 Then they add $350 + 100$ to make 450.
 $350 + 100 = 450$.

Last the student adds 43 to 450 to make 493.

So $345 + 148 = 493$

Student uses place value understanding to solve this problem.

They will start by keeping one of the addends whole and decomposing the other addend into place value.

$$345 + (100 + 40 + 8)$$

$$345 + 100 = 445 \text{ (adding hundreds to the number)}$$

$$445 + 40 = 485 \text{ (adding tens to the number)}$$

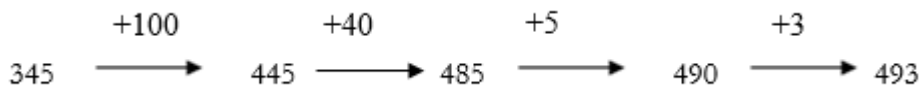
$$485 + 8 = 493 \text{ (adding ones to the number; using mental math students may decompose the 8 into 5 and 3 allowing them to add 5 to 485 to get 490 and then adding the remaining 3 ones.)}$$



Think mentally $485 + 5 = 490$
 $490 + 3 = 493$

So $345 + 148 = 493$

Students may use the arrow method to show their thinking for this problem. Usually their thinking is “mental math”. They use the arrow method to jot down their thinking to keep up with their mental computation.



So $345 + 148 = 493$

Below are examples of some of the strategies and written methods students may use to solve $568 - 279$.

Students may use the Adding up Strategy with the arrow method.



Next, they will mentally combine the numbers used to add up ($1 + 20 + 200 + 68$). So $568 - 279 = 289$

Students may use their place value understanding to solve this problem. They will start by keeping one number whole and decomposing the other number into place value.

$$568 - (200 + 70 + 9)$$

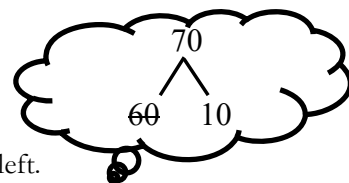
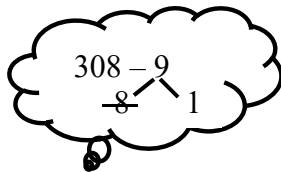
$$568 - 200 = 368 \text{ (subtracting hundreds)}$$

$$368 - 60 = 308 \text{ (subtracting 6 tens). I still have 1 ten left}$$

$$308 - 8 = 300 \text{ (subtracting 8 of the 9 ones to get to 300). I still have 1 one left.}$$

$$300 - 10 = 290$$

$$290 - 1 = 289$$



So $568 - 279 = 289$