

## 99- or 100-Charts

The 99- or 100-chart can be used for students to demonstrate both addition and subtraction. This example shows using a 100-chart to solve the problem  $82 - 39$ .

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
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$$82 - 39 = 43$$

This student started at 82 and moved back 30 to land on 52. The next step was to count back 9 and land on 43.

## Expanded Notation

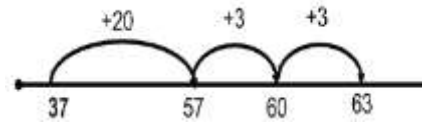
Adding and subtracting can be understood by using expanded notation.

$$\begin{array}{r}
 47 + 29 \\
 40 + 7 \\
 20 + 9 \\
 \hline
 60 + 16 \\
 \begin{array}{r}
 10 \quad 6 \\
 \diagdown \quad / \\
 60 + 10 + 6 = 76
 \end{array}
 \end{array}$$

Students use place value understanding to solve these problems.

## Subtracting with Number Lines

Just as with addition, subtraction can be shown on a number line. This student started at 37 and counted up to 63 to find a difference of 26.



$$63 - 37 = 26$$

## Subtracting with Number Lines

Second graders use their knowledge of addition and subtraction to solve one- and two-step word problems. The sample below shows a two-step problem.

*A farmer had 8 cows and some horses in a field. There were 45 animals in the field. Later, the farmer sent 6 more horses into the field. What is the total number of horses in the field?*

$$8 + \square = 45$$

The student would start by subtracting 8 (cows) from the total 45 (animals).

$$\begin{array}{r}
 45 - 8 \\
 \begin{array}{r}
 5 \quad 3 \\
 \diagdown \quad /
 \end{array}
 \end{array}$$

$$45 - 5 = 40$$

$$40 - 3 = 37$$

There are 37 horses.

If 6 more horses were added into the field that would mean there was a total of 43 horses.

$$37 + 6 = 43$$

# Parent Roadmap



## Grade 2 Math

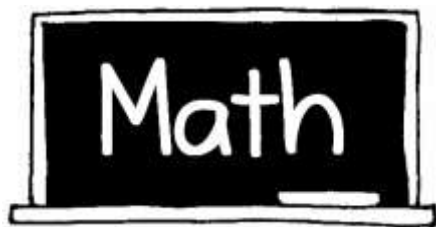
### Key Concepts

- Addition strategies
- Subtraction strategies



COWETA COUNTY  
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Adapted from Cobb County Schools



## Math Fact Strategies

Students in Grade 2 continue with strategies learned in Grade 1.

### Making Ten

This example shows how making a ten makes it easier to quickly add.

$$\begin{array}{r} 8 + 6 = \\ \swarrow \searrow \\ 2 \quad 4 \end{array}$$

$$10 + 4 = 14$$

This student adjusted these facts to quickly add them.

$$\begin{array}{r} 5 + 9 = \\ -1 \quad +1 \\ 5 + 9 = \\ 4 + 10 = 14 \end{array}$$

### Doubles

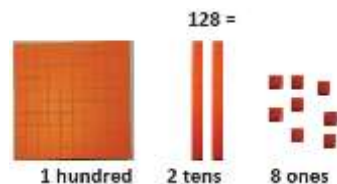
Second graders also add using the *doubles strategy*. This example shows two ways in which a student can add 6 + 8.

$$\begin{array}{r} 54 + 9 = \\ 50 + (4 + 9) = \\ 50 + 13 = 63 \end{array} \quad \text{OR} \quad \begin{array}{r} 54 \\ + 9 \\ \hline 13 \\ + 50 \\ \hline 63 \end{array}$$

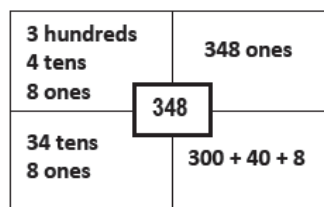
*Second grade students will add and subtract within 20. They will know their addition facts from memory by the end of second grade.*

### Working with Base Tens

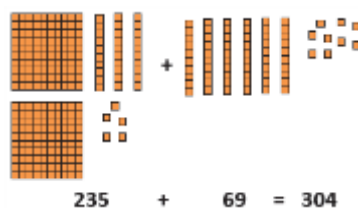
Place value is a primary focus for second graders. Students need to understand that numbers represent amounts of hundreds, tens, and ones. This begins by working with base tens.



Students need to understand the meaning in numbers.



Second graders move into addition using base tens to represent the problem. They then move to using numbers.



### Making a Friendly Number

A goal in second grade is for students to add mentally using strategies. One strategy is *making a friendly number*.

$$\begin{array}{r} 26 + 37 = \\ 26 + 37^{+3} \\ 26 + 40 = 66 \\ 66 - 3 = 63 \end{array} \quad \text{OR} \quad \begin{array}{r} 26 + 37 = \\ 26 + 37^{-3 +3} \\ 23 + 40 = 63 \end{array}$$

### Partial Sums

Another strategy to help students understand addition involves working with *partial sums*.

$$\begin{array}{r} 64 + 19 = 83 \\ 64 \\ + 19 \\ \hline 13 \\ \hline 70 \\ \hline 83 \end{array}$$

### Open Number Lines

Students in second grade can use a number line to show addition problems.



### A Subtraction Strategy

This strategy might be used to assist second graders in thinking about subtraction when working with facts.

$$\begin{array}{r} 24 - 9 = \\ \swarrow \searrow \\ 4 \quad 5 \\ 24 - 4 = 20 \\ 20 - 5 = 15 \end{array}$$