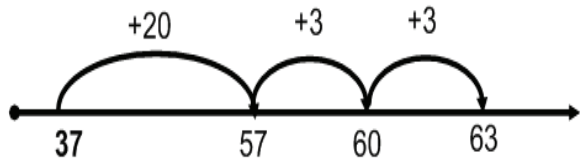


In the same way, subtraction can be shown on a number line. This student started at 37 and counted up to 63 to find a difference of 26.

$$63 - 37 = 26$$



Adding and subtracting can be understood by using expanded notation.

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

Students use place value understanding to solve these problems.

The hundreds chart can be used for students to demonstrate both addition and subtraction. This example shows 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

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.

$$82 - 39 = 43$$

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).

$$\begin{array}{r}
 45 - 8 \\
 \quad \swarrow \searrow \\
 37
 \end{array}$$

$$45 - 8 = 37$$

$$45 - 5 = 40$$

$$40 - 3 = 37$$

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



Strategies for addition and subtraction

Math



Math Fact Strategies

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

$$8 + 6 =$$

$$2 \quad 4$$

$$10 + 4 = 14$$

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

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

$$6 + 8 =$$

$$6 + 6 + 2 =$$

$$6 + 6 = 12$$

$$12 + 2 = 14$$

OR

$$6 + 2 + 8 =$$

$$8 + 8 = 16$$

$$16 - 2 = 14$$

This student adjusted these facts to quickly add them.

$$5 + 9 =$$

$$5^{-1} + 9^{+1}$$

$$4 + 10 = 14$$

Below is a strategy that might be used to assist second graders in thinking about subtraction when working with facts.

$$24 - 9 =$$

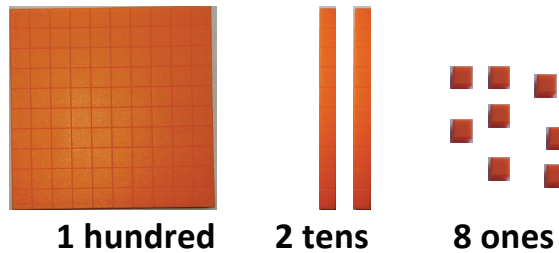
$$4 \quad 5$$

$$24 - 4 = 20$$

$$20 - 5 = 15$$

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.

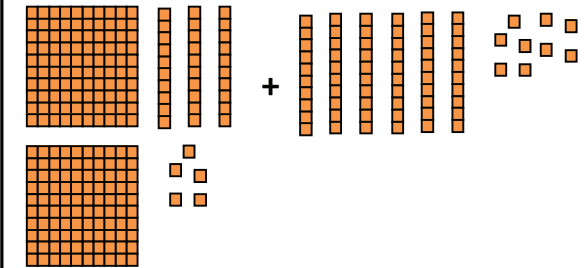


Students need to understand the meaning in numbers.

3 hundreds 4 tens 8 ones	348 ones
348	
34 tens 8 ones	$300 + 40 + 8$

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

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



$$235 + 69 = 304$$

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

$$26 + 37 =$$

$$26 + 37^{+3}$$

$$26 + 40 = 66$$

$$66 - 3 = 63$$

OR

$$26 + 37 =$$

$$26^{-3} + 37^{+3}$$

$$23 + 40 = 63$$

$$64 + 19 = 83$$

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

$$64$$

$$+ 19$$

$$13$$

$$\hline 83$$

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

$$26 + 37 = 63$$

