

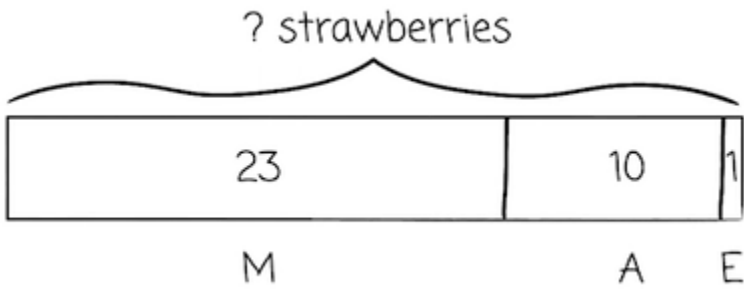
2nd Grade Mission 4 Notes

READ the problem

In the morning, Ms. Johnson picked 23 strawberries. In the afternoon, she picked 10 more. In the evening, she picked 1 more.

How many strawberries did Ms. Johnson pick in all?

DRAW a picture to match the problem and solve for the problem



$$23 + 10 = 33$$

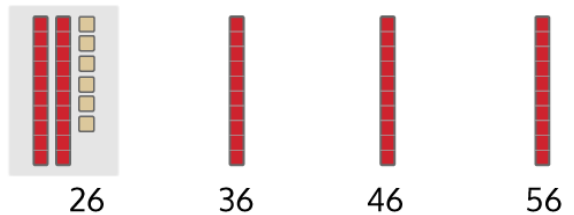
$$33 + 1 = 34$$

WRITE a sentence to match the problem.

Ms. Johnson picked 34 strawberries in all.

1 more	Add 1	Only ones place changes - Numbers go up	41, 42, 43, 44	1 more than 45 is 46
1 less	Subtract 1	Only ones place changes - Numbers go down	45, 44, 43, 42	1 less than 45 is 44
10 more	Add 10	Only tens place changes - Numbers go up	45, 55, 65, 75	10 more than 45 is 55
10 less	Subtract 10	Only tens place changes - Numbers go down	55, 45, 35, 25	10 less than 45 is 35

Arrow way $33 \xrightarrow{+10} 43 \xrightarrow{-1} 42 \xrightarrow{-10} 32$



$26 \xrightarrow{+10} 36 \xrightarrow{+10} 46 \xrightarrow{+10} 56$

$26 \xrightarrow{+30} 56$

$$47 \xrightarrow{+20} 67$$

$$47 + 20 = 67$$

$$67 \xrightarrow{-20} 47$$

$$47 \xrightarrow{-20} 27$$

$$47 - 20 = 27$$

20 less than 47 is 27

4 tens + 2 tens 8 ones = 6 tens 8 ones

$$40 \xrightarrow{+28} 68$$

$$48 \xrightarrow{+20} 68 \xrightarrow{+1} 69$$

$$48 + 21 = 69$$

Friendly neighbor to 21

$$68 - 21 = 47$$

$$68 \xrightarrow{-20} 48 \xrightarrow{-1} 47$$

$$48 + 19 = 67$$

$$48 \xrightarrow{+20} 68 \xrightarrow{-1} 67$$

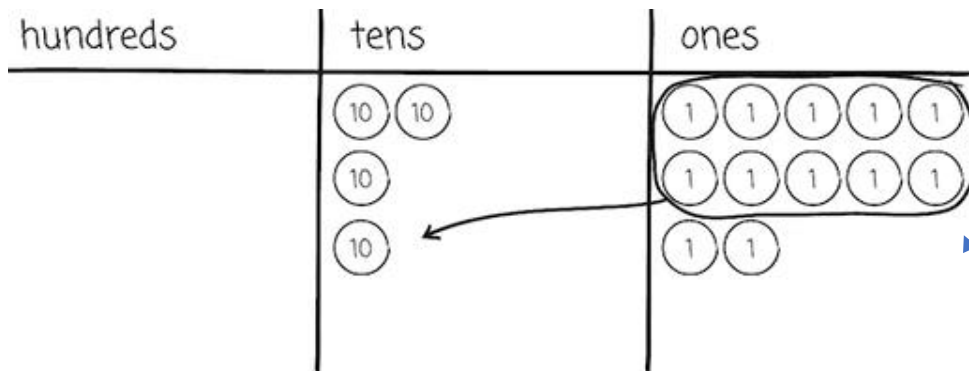
Friendly neighbor to 19

$$68 - 19 = 49$$

$$68 \xrightarrow{-20} 48 \xrightarrow{+1} 49$$

Friendly neighbor is the closest ten to the number you are adding or subtracting.

Place Value Chart



4 tens

2 ones

Bundle a ten

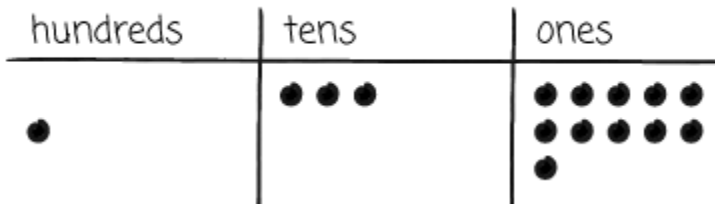
Vertical Method or Standard Algorithm

$$\begin{array}{r}
 25 \\
 + 17 \\
 \hline
 12 \\
 + 30 \\
 \hline
 42
 \end{array}$$

total ones

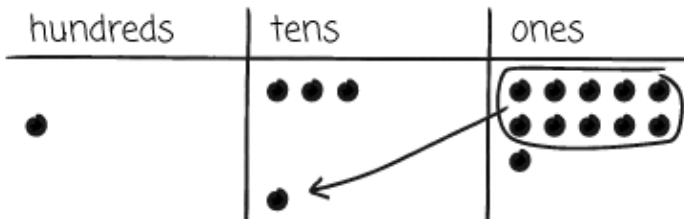
total tens

Before bundling: 1 hundred 3 tens 11 ones



$$\begin{array}{r} 35 \\ + 106 \\ \hline \end{array}$$

After bundling: 1 hundred 4 tens 1 one



Whole part

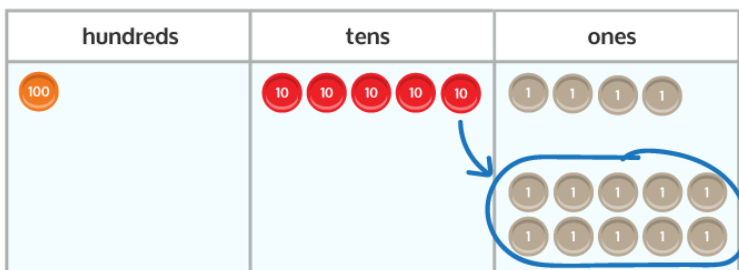
46 – 18 (not enough ones to subtract)

Unbundle 1 ten for 10 ones.



Show the whole in the place value chart, then take away the part.

To get more ones, you need to unbundle a ten.



$$\begin{array}{r} 4 \ 14 \\ 1\cancel{5}4 \\ - 39 \\ \hline \end{array}$$

algorithm that matches place value chart

1 ten	10
2 tens	20
3 tens	30
4 tens	40
5 tens	50
6 tens	60
7 tens	70
8 tens	80
9 tens	90
10 tens	100
11 tens	110
12 tens	120
13 tens	130
14 tens	140
15 tens	150
16 tens	160
17 tens	170
18 tens	180
19 tens	190
20 tens	200

1 one + 9 ones = 10 ones = 1 ten

1 ten + 9 tens = 10 tens = 1 hundred

10 of the same unit makes 1 of the next higher unit.

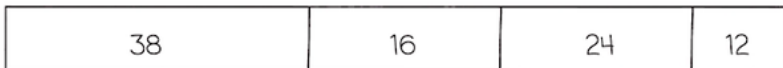
$$72 \xrightarrow{+8} 80 \xrightarrow{+10} 90 \xrightarrow{+10} 100$$

$$72 + 28 = 100$$

We bundle when we have enough to make a group of 10

There are 38 flutes, 16 violins, 24 clarinets, and 12 trumpets at the music school.

How many instruments are there in total?



$$\begin{array}{r}
 16 + 24 + 38 + 12 \\
 \begin{array}{l}
 / \quad \backslash \\
 4 \quad 20 \\
 / \quad \backslash \\
 2 \quad 10
 \end{array} \\
 20 + 20 = 40 \quad 40 + 10 = 50 \\
 40 + 50 = 90
 \end{array}$$

When adding more than 2 numbers, look for the pairs that will give you a ten.

$$23 + 27 + 16 = 66$$

$$20 + 20 = 40$$

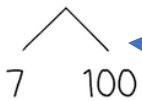
$$3 + 7 = 10$$

$$40 + 10 = 50$$

$$50 + 16 = 66$$

There are 90 instruments at the school in total.

$$107 - 90 = 17$$



When subtracting, take out a ten or hundred from the number and show the ones left.

$$100 - 90 = 10$$

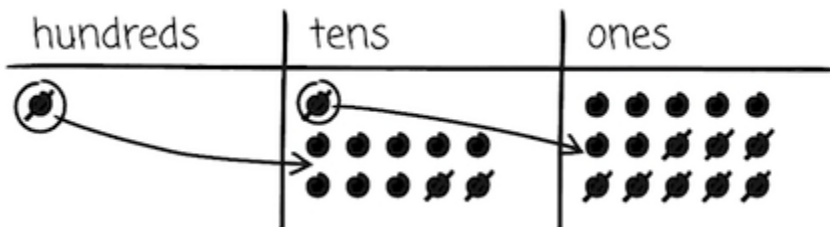
$$10 + 7 = 17$$

When we subtract, ALWAYS start with the WHOLE.

Unbundle a ten to get more ones.

Unbundle a hundred to get more tens.

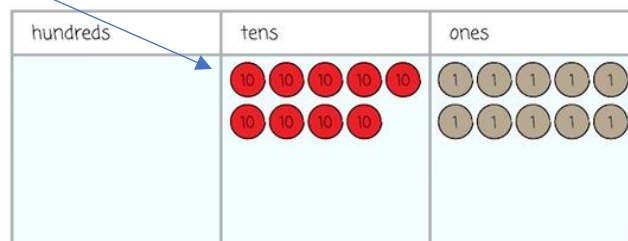
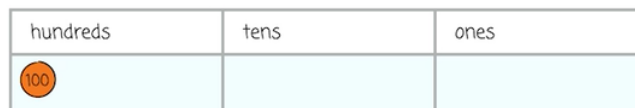
Subtracting and Unbundling with Place Value Chart and Algorithm



$$\begin{array}{r} 10 \\ 0 \cancel{0} 15 \\ \cancel{11} \cancel{7} \\ - 28 \\ \hline 87 \end{array}$$

Value- means the worth or amount of something.

The value hasn't changed. We still have 100 disks.



$$\begin{array}{r} 9 \\ 0 \cancel{0} 10 \\ \cancel{10} \cancel{0} \\ - 83 \\ \hline \end{array}$$

Subtracting with the Arrow Way/Count On Strategy

$$100 - 83 = 17$$

$$83 \xrightarrow{+7} 90 \xrightarrow{+10} 100$$

$$7 + 10 = 17$$

Solve with Standard Algorithm

$$\begin{array}{r} 9 \\ 110 \\ \cancel{200} \\ - 78 \\ \hline 122 \end{array}$$

Solve with Place Value Chart

$$200 - 78 = 122$$

