

# Unit 16 : Numbers to 120

## Friendly Notes

### Counting

<b>Number</b>	10	20	30	40	50	60	70	80	90	100
<b>Number in words</b>	ten	twenty	thirty	forty	fifty	sixty	seventy	eighty	ninety	one hundred

<b>Number</b>	101	102	103	104	105	106	107	108	109	110
<b>Number in words</b>	one hundred one	one hundred two	one hundred three	one hundred four	one hundred five	one hundred six	one hundred seven	one hundred eight	one hundred nine	one hundred ten

<b>Number</b>	111	112	113	114	115	116	117	118	119	120
<b>Number in words</b>	one hundred eleven	one hundred twelve	one hundred thirteen	one hundred fourteen	one hundred fifteen	one hundred sixteen	one hundred seventeen	one hundred eighteen	one hundred nineteen	one hundred twenty

## Tens and Ones

$$62 = 6 \text{ tens } 2 \text{ ones}$$

$$74 = 7 \text{ tens } 4 \text{ ones}$$

$$98 = 9 \text{ tens } 8 \text{ ones}$$

$$\begin{aligned} 105 &= 10 \text{ tens } 5 \text{ ones} \\ &= 1 \text{ hundred } 5 \text{ ones} \end{aligned}$$

$$\begin{aligned} 118 &= 11 \text{ tens } 8 \text{ ones} \\ &= 1 \text{ hundred } 1 \text{ ten } 8 \text{ ones} \end{aligned}$$

$$\begin{aligned} 120 &= 12 \text{ tens } 0 \text{ ones} \\ &= 1 \text{ hundred } 2 \text{ tens} \end{aligned}$$

Write the numbers in words.

44 — forty-four

55 — fifty-five

62 — sixty-two

74 — seventy-four

98 — ninety-eight

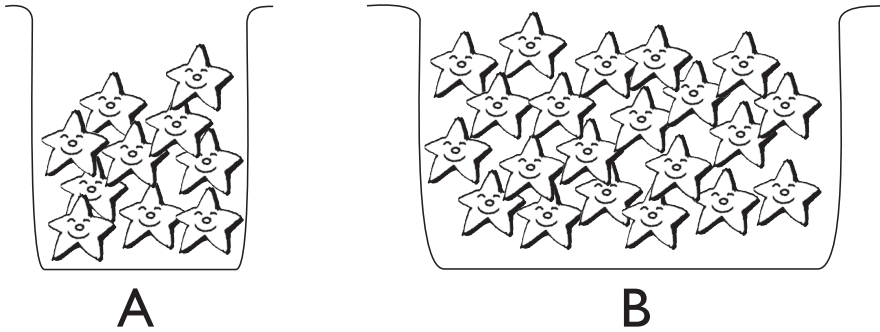
105 — one hundred

118 — one hundred eighteen

120 — one hundred twenty

## Estimation

When we estimate, we make a reasonable guess how many of an object there are. To find out exactly how many there are, we count.



There 10 stars in Jar A.

There are about 20 stars in Jar B.

## Comparing and Ordering Numbers

We compare 2-digit numbers by comparing the tens first, then the ones.

54		34		90		59	
Tens	Ones	Tens	Ones	Tens	Ones	Tens	Ones
5	4	3	4	9	0	5	9

9 tens is greater than 3 tens and 5 tens.

90 is the greatest.

3 tens is smaller than 9 tens and 5 tens.

34 is the smallest.

If the tens are the same, we compare the ones.

54 is 5 tens 4 ones.

59 is 5 tens 9 ones.

9 ones is greater than 4 ones.

59 is greater than 54.

Arrange these numbers in order: 54, 34, 90, 59

Begin with the smallest: 34, 54, 59, 90

Begin with the greatest: 90, 59, 54, 34

We use the sign  $>$  to show that one number **is greater than** the other.

We use the sign  $<$  to show that one number **is less than** the other.

54

34

90

59

90 is greater than 34.

$90 > 34$

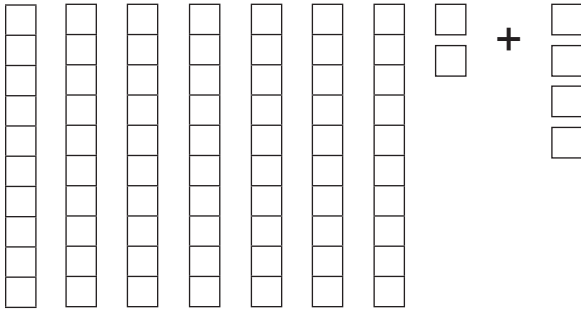
54 is less than 59.

$54 < 59$

## Addition Within 100

To add a 2-digit number and a 1-digit number, we can count on or add with number bonds.

$$72 + 4 = ?$$

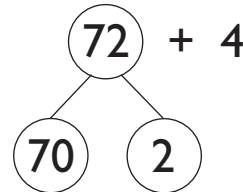


Count on 4 ones from 72: 73, 74, 75, 76



**Step 1:** Add 2 ones to 4 ones.

$$2 + 4 = 6$$



**Step 2:** Add 70 and 6.

$$70 + 6 = 76$$

So,  $72 + 4 = 76$ .

We can also place the numbers one on top of the other and add as shown.

$$\begin{array}{r} 72 \\ + 4 \\ \hline 6 \end{array}$$

Add the ones.  
2 ones + 4 ones  
= 6 ones

$$\begin{array}{r} 72 \\ + 4 \\ \hline 76 \end{array}$$

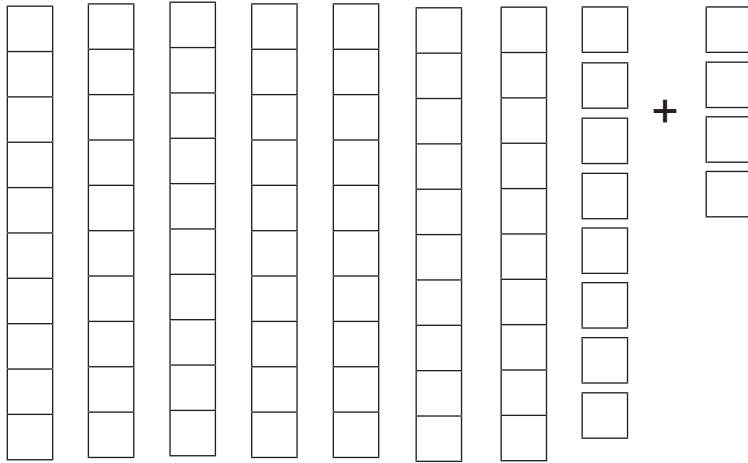
Add the tens.  
7 tens + 0 ones  
= 7 tens

4 ones must be placed below 2 ones, not below 7 tens.



To add a 2-digit number and a 1-digit number, we can also make a ten first.

$$78 + 4 = ?$$

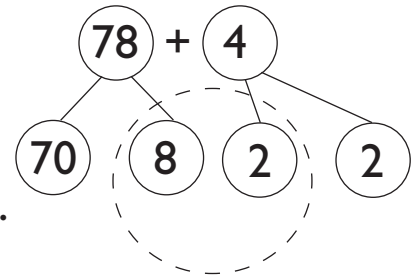


**Step 1:** Add 8 ones and 2 ones.

$$8 + 2 = 10$$

**Step 2:** Add 7 tens, 1 ten, and 2 ones.

$$70 + 10 + 2 = 82$$



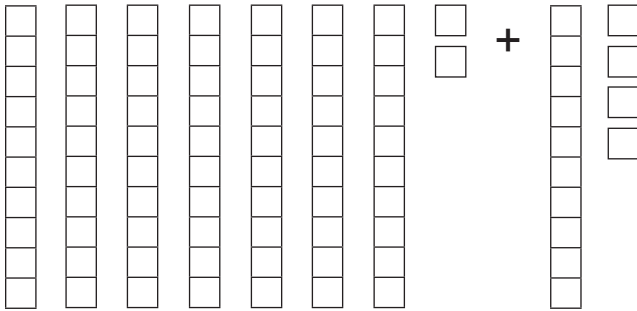
So,  $78 + 4 = 82$ .

$$78 + 4 = 70 + 10 + 2 = 82$$



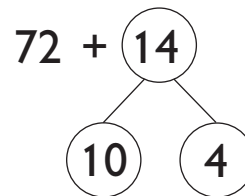
To add two 2-digit numbers, we can add the tens first.

$$72 + 14 = ?$$



**Step 1:** Add 72 and 10.

$$72 + 10 = 82$$



**Step 2:** Add 82 and 4.

$$82 + 4 = 86$$

So,  $72 + 14 = 86$ .

$$72 + 14 = 72 + 10 + 4$$

We can also place the numbers one on top of the other and add as shown.

$$\begin{array}{r} 72 \\ + 14 \\ \hline 6 \end{array}$$

Add the ones.

$$\begin{array}{l} 2 \text{ ones} + 4 \text{ ones} \\ = 6 \text{ ones} \end{array}$$

$$\begin{array}{r} 72 \\ + 14 \\ \hline 86 \end{array}$$

Add the tens.

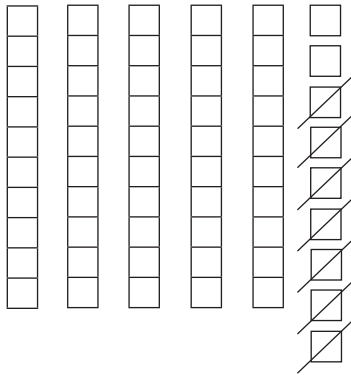
$$\begin{array}{l} 7 \text{ tens} + 1 \text{ ten} \\ = 8 \text{ tens} \end{array}$$



## Subtraction Within 100

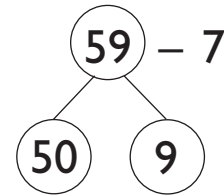
To subtract a 1-digit number from a 2-digit number, we can count backwards or subtract with number bonds.

$$59 - 7 = ?$$



**Step 1:** Subtract 7 ones from 9 ones.

$$9 - 7 = 2$$



**Step 2:** Add 5 tens and 2 ones.

$$50 + 2 = 52$$

So,  $59 - 7 = 52$ .

We can also place the numbers one on top of the other and subtract as shown.

$$\begin{array}{r} 59 \\ - 7 \\ \hline 2 \end{array}$$

Subtract the ones.

$$\begin{array}{l} 9 \text{ ones} - 7 \text{ ones} \\ = 2 \text{ ones} \end{array}$$

$$\begin{array}{r} 59 \\ - 7 \\ \hline 52 \end{array}$$

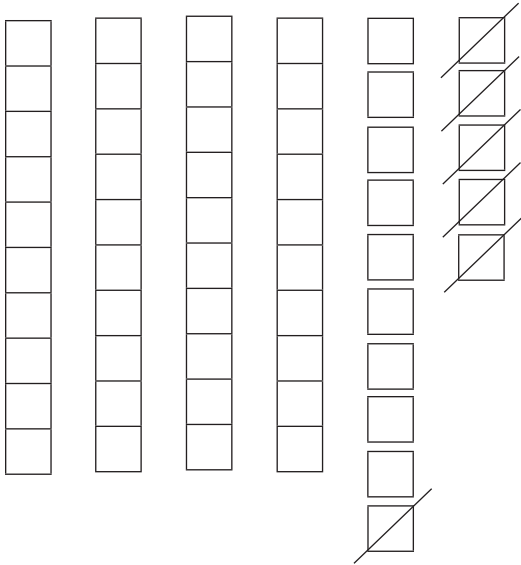
Subtract the tens.

$$\begin{array}{l} 5 \text{ tens} - 0 \text{ tens} \\ = 5 \text{ tens} \end{array}$$



To subtract a 1-digit number from a 2-digit number, sometimes we have to change 1 ten into 10 ones.

$$55 - 6 = ?$$



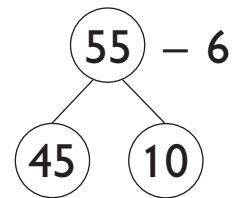
5 ones is less than 6 ones.

We cannot take away 6 ones from 5 ones.

We change 1 ten into 10 ones.

**Step 1:** Subtract 6 from 15.

$$10 - 6 = 4$$



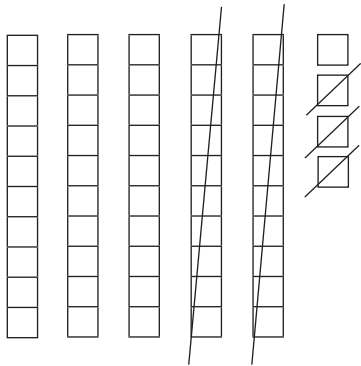
**Step 2:** Add 45 and 4.

$$45 + 4 = 49$$

So,  $55 - 6 = 49$ .

To subtract a 2-digit number from another 2-digit number, we can subtract the tens first.

$$54 - 23 = ?$$



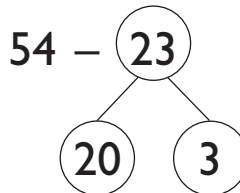
**Step 1:** Subtract 20 from 54.

$$54 - 20 = 34$$

**Step 2:** Subtract 3 from 34.

$$34 - 3 = 31$$

So,  $54 - 23 = 31$ .



$$54 - 23 = 54 - 20 - 3$$

We can also place the numbers one on top of the other and subtract as shown.

$$\begin{array}{r} 54 \\ - 23 \\ \hline 1 \end{array}$$

Subtract the ones.  
4 ones – 3 ones  
= 1 one

$$\begin{array}{r} 54 \\ - 23 \\ \hline 31 \end{array}$$

Subtract the tens.  
5 tens – 2 tens  
= 3 tens

