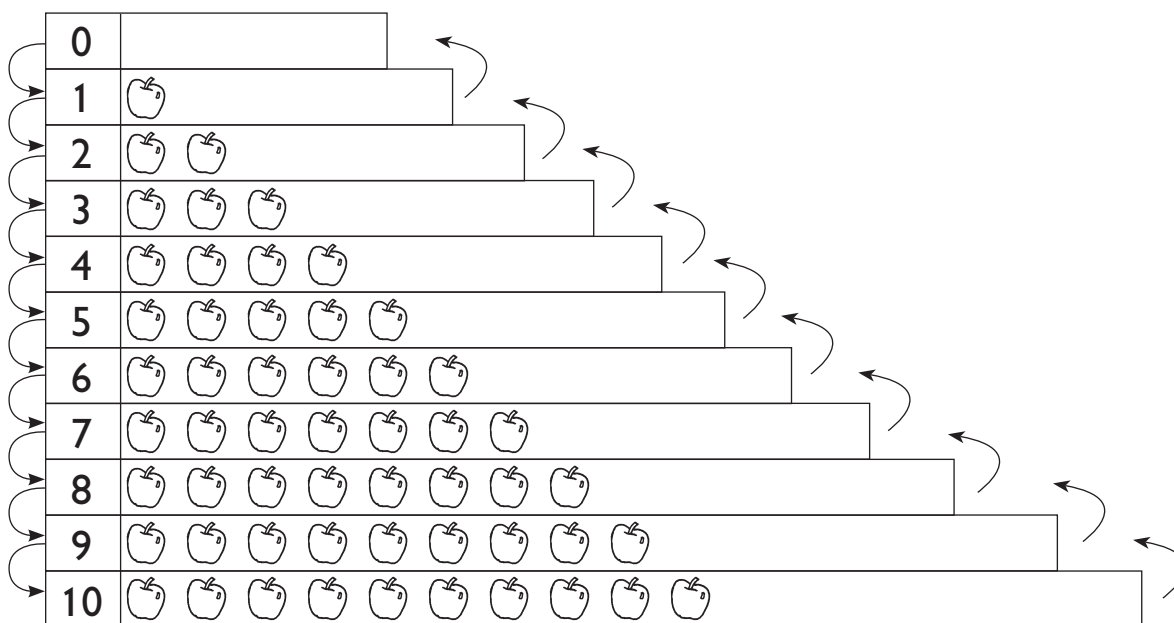


Unit 1 : Numbers 0 to 10

Friendly Notes

Counting Numbers

We can count on from 0 to 10.
We can also count backwards from 10 to 0.



Writing Numbers in Words

	🍏	🍏 🍏	🍏 🍏 🍏	🍏 🍏 🍏 🍏	🍏 🍏 🍏 🍏 🍏
zero	one	two	three	four	five
🍏 🍏 🍏 🍏 🍏 🍏	🍏 🍏 🍏 🍏 🍏 🍏 🍏	🍏 🍏 🍏 🍏 🍏 🍏	🍏 🍏 🍏 🍏 🍏 🍏 🍏 🍏 🍏	🍏 🍏 🍏 🍏 🍏 🍏 🍏 🍏 🍏 🍏	🍏 🍏 🍏 🍏 🍏 🍏 🍏 🍏 🍏 🍏
six	seven	eight	nine	ten	

Comparing Numbers

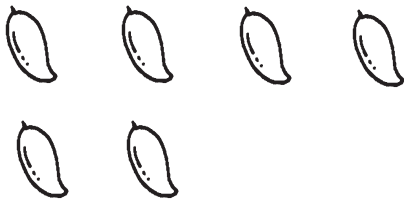


Molly has 4 apples.



Sue has 4 pears.

Molly and Sue have the **same number** of fruit.



Vivian has 6 mangoes.

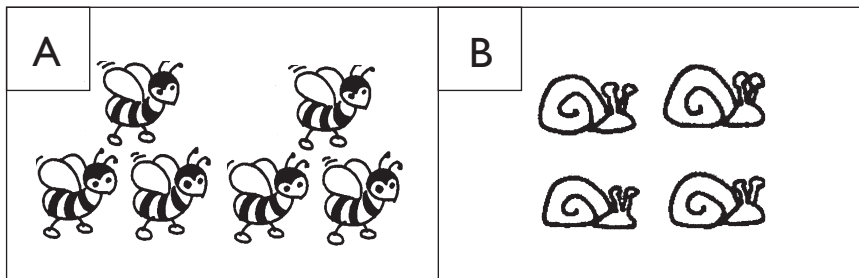
Molly and Vivian do not have the same number of fruit.

Molly has **fewer** fruit than Vivian.

Vivian has **more** fruit than Molly.

Which set has less?

Set A has 6 bees.
Set B has 4 snails.



Set B has less.

Unit 2 : Number Bonds

Friendly Notes

Making Number Stories

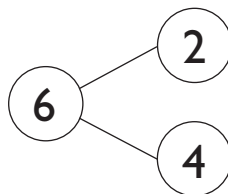
There are 6 children.

2 are boys.

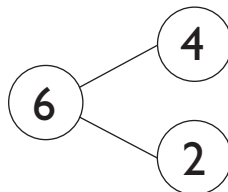
4 are girls.



2 and 4 make 6.

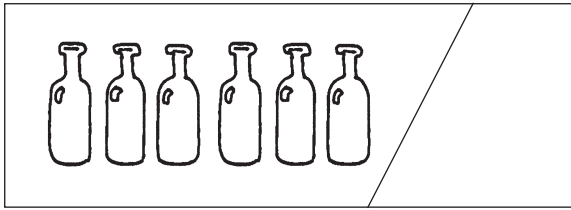


4 and 2 also make 6.

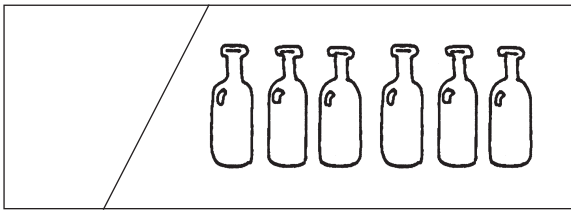
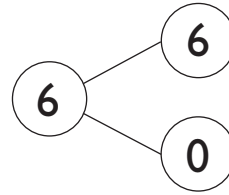


2, 4, and 6 make a number bond.

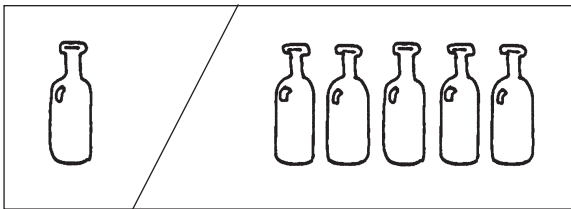
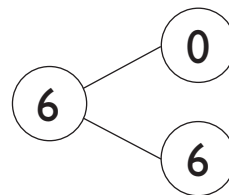
What other pairs of numbers make 6?
Look at these number bonds.



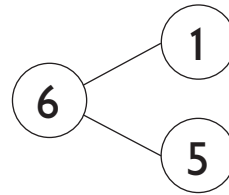
6 and 0 make 6.



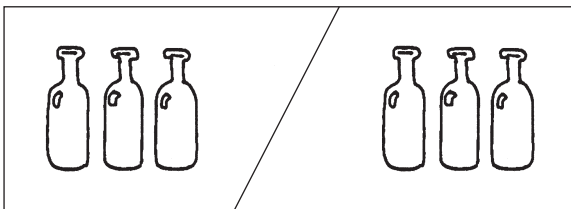
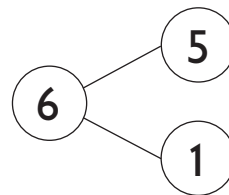
0 and 6 make 6.



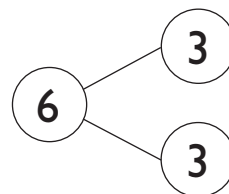
1 and 5 make 6.



5 and 1 make 6.



3 and 3 make 6.



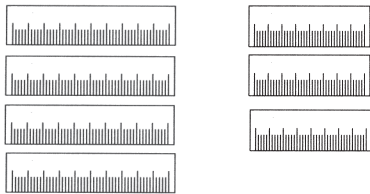
Unit 3 : Addition Within 10

Friendly Notes

Addition

Addition means **putting together**.

Let us make an addition story.



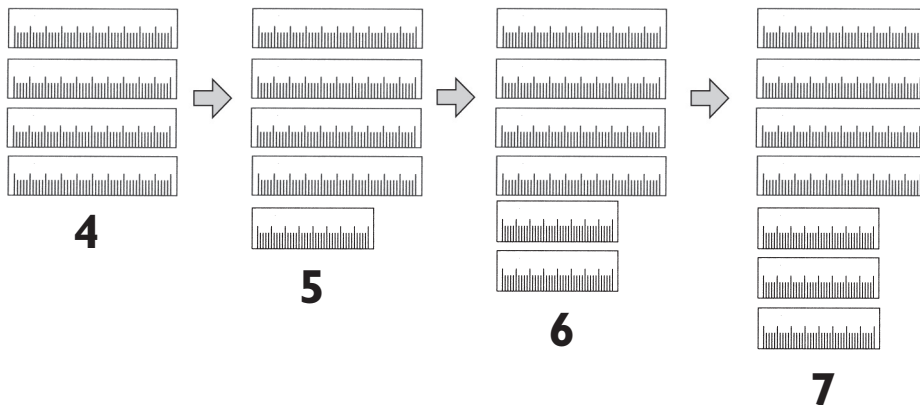
We put together
4 rulers and 3 rulers
to get 7 rulers.



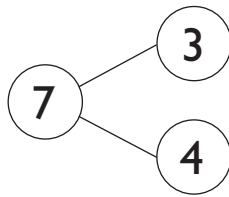
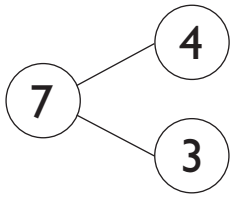
There are **4** long rulers.
There are **3** short rulers.
There are **7** rulers altogether.

We can count on to add the number of rulers.

Begin with 4 and count on to 5, 6, and 7.



We can use number bonds to show addition.



We write the addition equations:

$$4 + 3 = 7$$

$$3 + 4 = 7$$

Add 4 to 3.
Add 3 to 4.
The answer is 7.

We can also write this way:

$$7 = 4 + 3$$

$$7 = 3 + 4$$



$4 + 3 = 7$
“Four plus three equals seven.”

$3 + 4 = 7$
“Three plus four equals seven.”

So, $4 + 3 = 3 + 4$.

‘+’ means ‘add’.
‘=’ means ‘equal’.



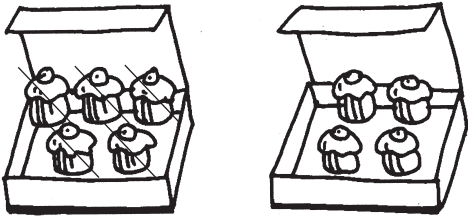
Unit 4 : Subtraction Within 10

Friendly Notes

Subtraction

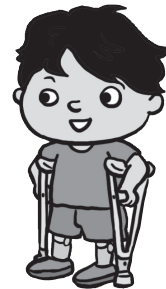
Subtraction means **taking away**.

Let us make a subtraction story.



Cross out 5 cupcakes.

There are **9** cupcakes.
Jack eats **5** cupcakes.
4 cupcakes are left.



We write the subtraction equation:

$$9 - 5 = 4$$

Subtract 5 from 9.
The answer is 4.

We say:
“Nine minus five equals four.”

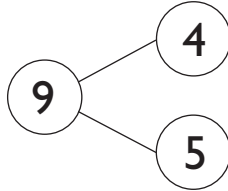
‘-’ means ‘subtract’.



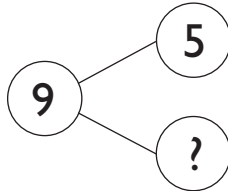
Methods of Subtraction

We can use number bonds to show subtraction.

$$9 = 4 + 5$$
$$9 - 4 = 5$$



$$9 - 5 = 4$$

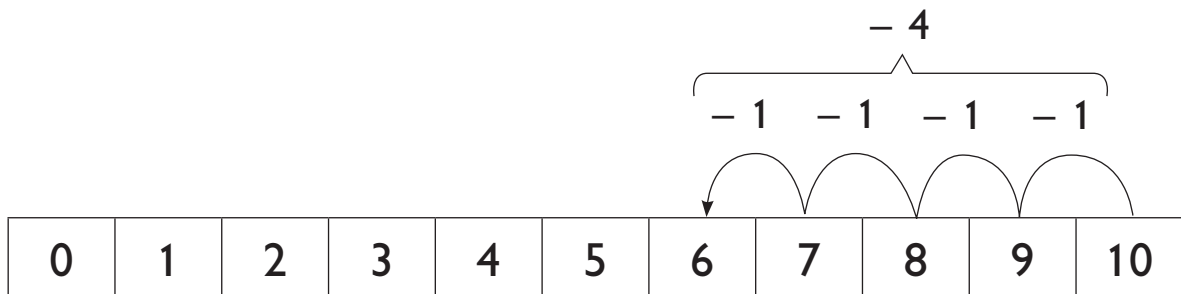


Subtract 5 from 9 to find the missing number.



We can count backwards to subtract.

Subtract 4 from 10.
Begin with 10 and count backwards.



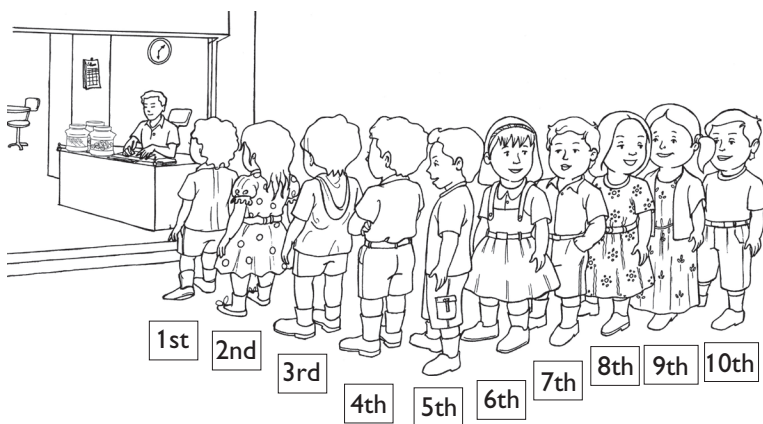
Unit 5 : Ordinal Numbers

Friendly Notes

Naming Position

Ordinal numbers help us tell the position of a person or an object.

Cardinal Numbers	Ordinal Numbers
1	1st (first)
2	2nd (second)
3	3rd (third)
4	4th (fourth)
5	5th (fifth)
6	6th (sixth)
7	7th (seventh)
8	8th (eighth)
9	9th (ninth)
10	10th (tenth)



9th is spelled without an 'e': 'ninth', not 'nineth'.



Ordinal numbers can be used to name positions from the left or right.

There are 5 fruits.



papaya



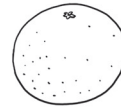
pear



apple



banana



orange

Left

Right

If we count from the left:

The papaya is **1st from the left**.

The pear is **2nd from the left**.

The orange is **5th from the left**.

If we count from the right:

The orange is **1st from the right**.

The banana is **2nd from the right**.

The papaya is **5th from the right**.

The orange is **last from the left**.
The papaya is **last from the right**.













Unit 6 : Numbers to 20

Friendly Notes

Counting

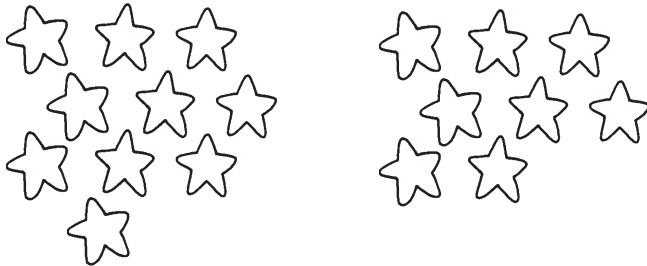
These are the numbers 11 to 20.

We learn to count and write these numbers in words.

11 eleven	
12 twelve	
13 thirteen	
14 fourteen	
15 fifteen	
16 sixteen	
17 seventeen	
18 eighteen	
19 nineteen	
20 twenty	

To make bigger numbers easier to count, we can make groups of 10 first.

Count the stars.

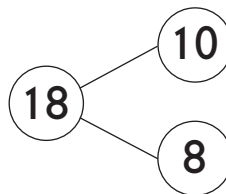


Count on from 10:
10, 11, 12, ... 18

10 and 8 make 18.

$$10 + 8 = 18$$

There are 18 stars altogether.



Ordering and Comparing Numbers

When we compare two numbers, we check which number is greater and which is smaller.

Which number is greater? Count and compare.

Set A has 15 bees.

Set B has 12 bees.

There are 3 more bees in Set A than in Set B.

15 is **greater** than 12.

12 is **smaller** than 15.

When we compare two numbers, we use these words:

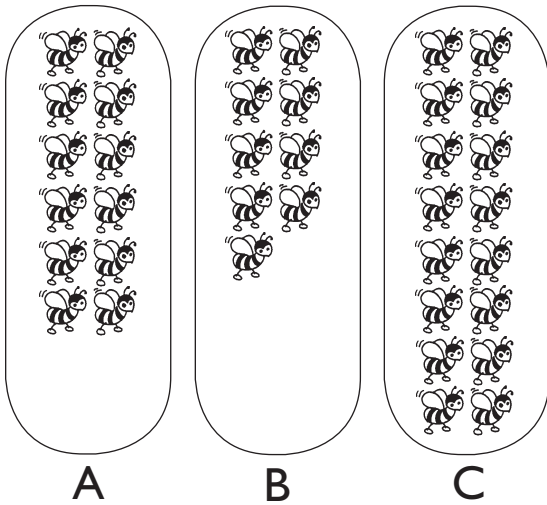
greater than

smaller than

When we compare more than two numbers, we use these words:

the greatest

the smallest



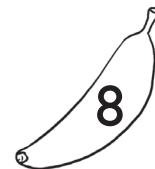
9 is smaller than 12 and 16.
9 is the smallest.
16 is greater than 9 and 12.
16 is the greatest.



Set B has the smallest number.
Set C has the greatest number.

We can arrange numbers in order when we know how to count them in order.

Let us compare these numbers and arrange them in order.



- (a) Begin with the greatest: 13, 10, 8, 4
(b) Begin with the smallest: 4, 8, 10, 13

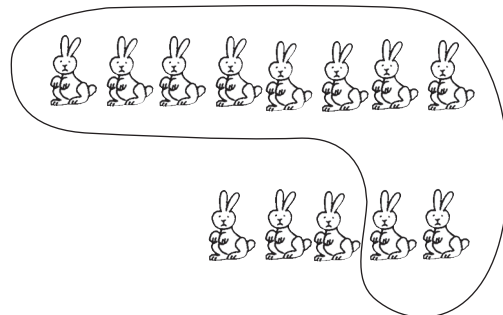
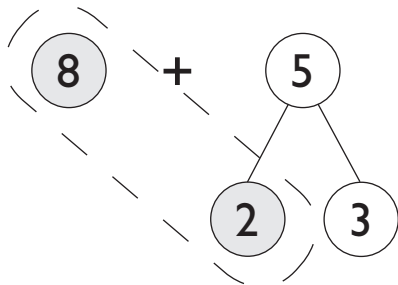
Addition

We can first make 10 to help us add.

Add 8 and 5.

Step 1: Add 8 and 2 to make 10.

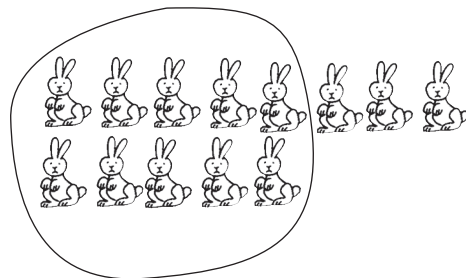
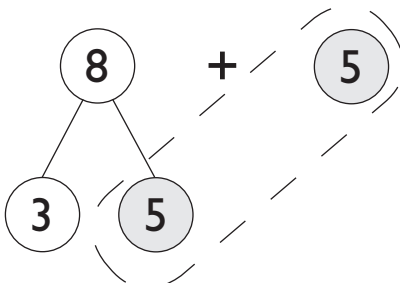
Step 2: Add 10 and 3. We get 13.



OR

Step 1: Add 5 and 5 to make 10.

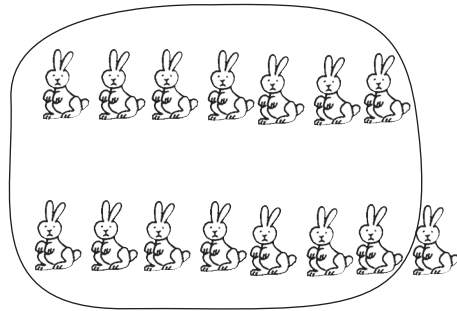
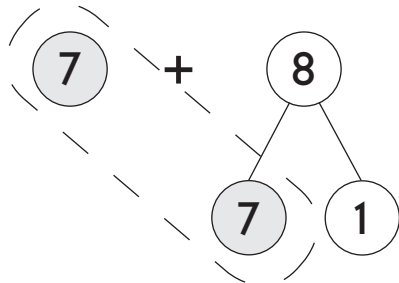
Step 2: Add 10 and 3. We get 13.



We can add using known facts.

Step 1: Add 7 and 7 to make 14.

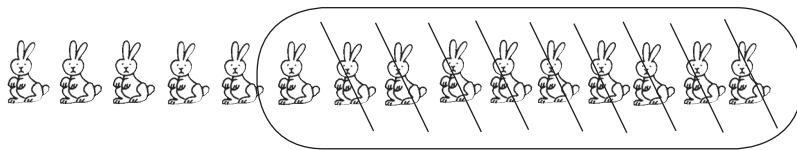
Step 2: Add 14 and 1. We get 15.



Subtraction

We can first make 10, then subtract.

Subtract 9 from 15.

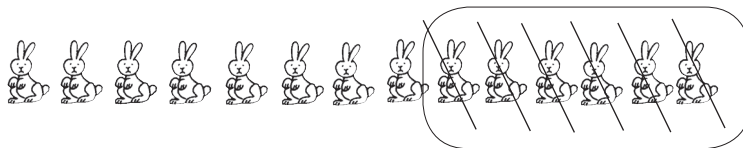


Step 1: We make a 10.

Step 2: Subtract 9 from 10. We get 1.

Step 3: Add 5 and 1. We get 6.

Subtract 6 from 14.



Step 1: Subtract 4 from 14. We get 10.

Step 2: Then we subtract the remaining 2 from 10.
We get 8.

Related Addition and Subtraction Facts

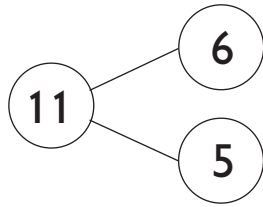


$$6 + 5 = 11$$

$$5 + 6 = 11$$

$$11 - 5 = 6$$

$$11 - 6 = 5$$



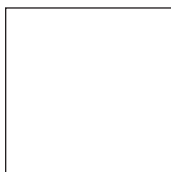
Unit 7 : Shapes

Friendly Notes

Common Shapes

These are some common shapes.

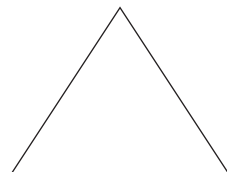
These shapes can be used to make new shapes or form pictures.



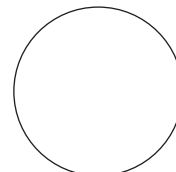
Square



Rectangle

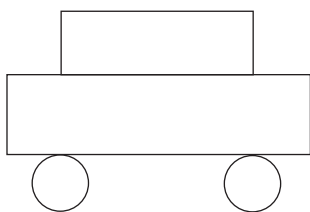


Triangle

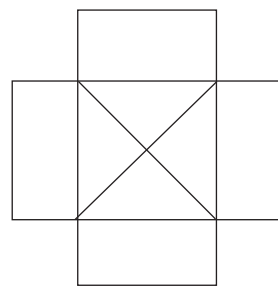


Circle

What shapes can you see?



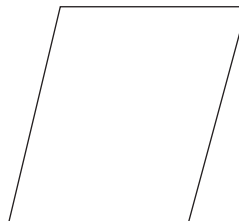
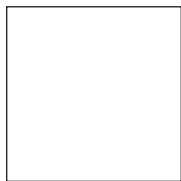
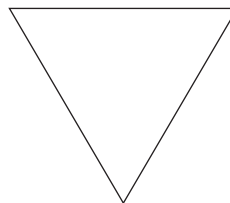
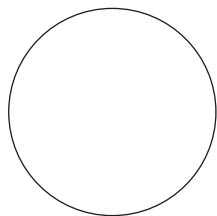
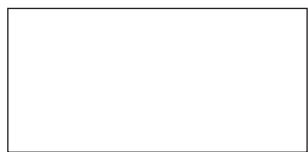
I can see rectangles and circles.



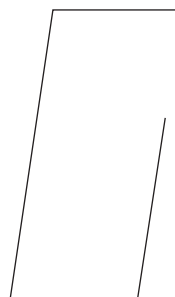
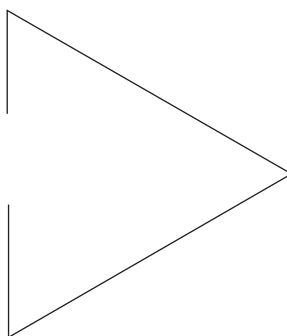
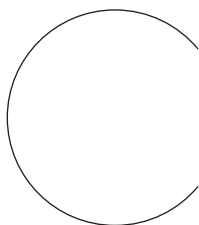
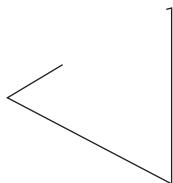
I can see rectangles, triangles, and a square.



These shapes are closed.

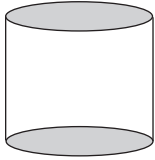


These shapes are not closed.

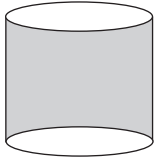




Some solids have **flat** surfaces.
We can **stack**, **roll**, or **slide** objects.



These are flat surfaces.



This is not a flat surface.



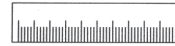
I can stack these boxes.



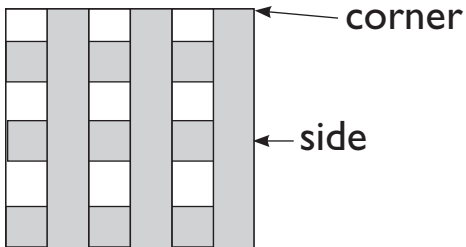
I can roll this marble.



I can slide this ruler.



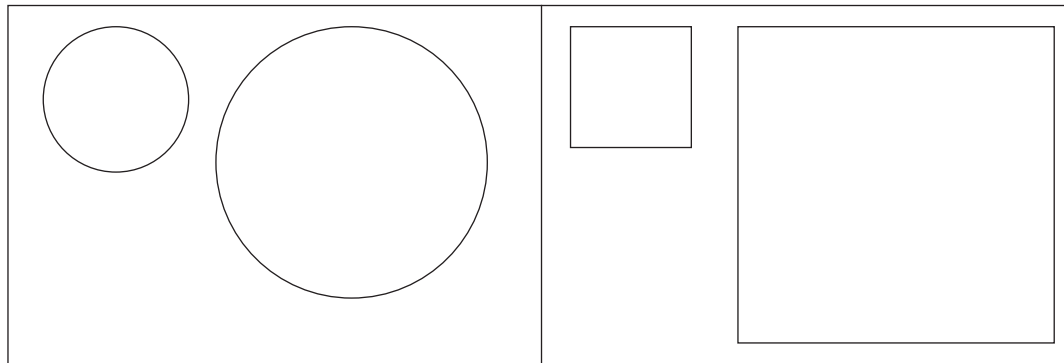
Some shapes have **corners** and **sides**.



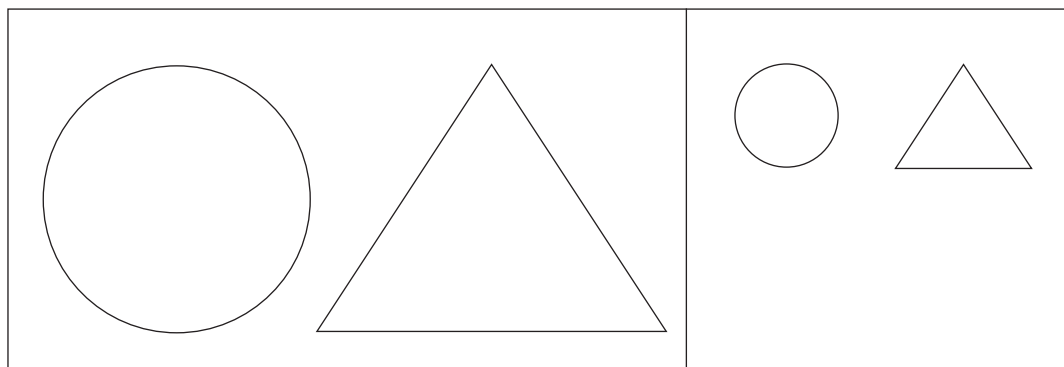


We can group shapes in different ways.

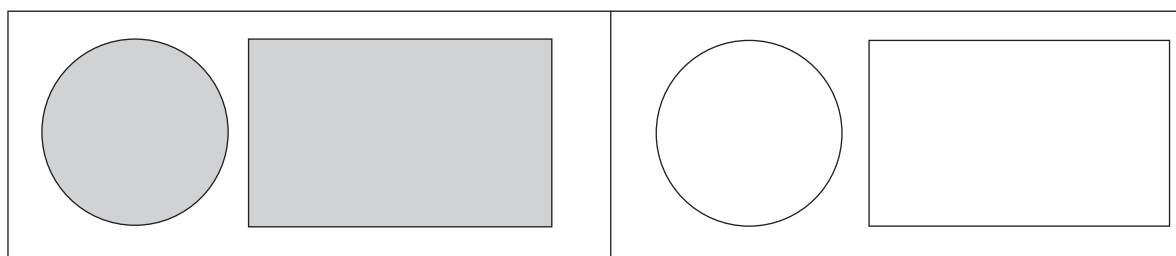
By shape



By size

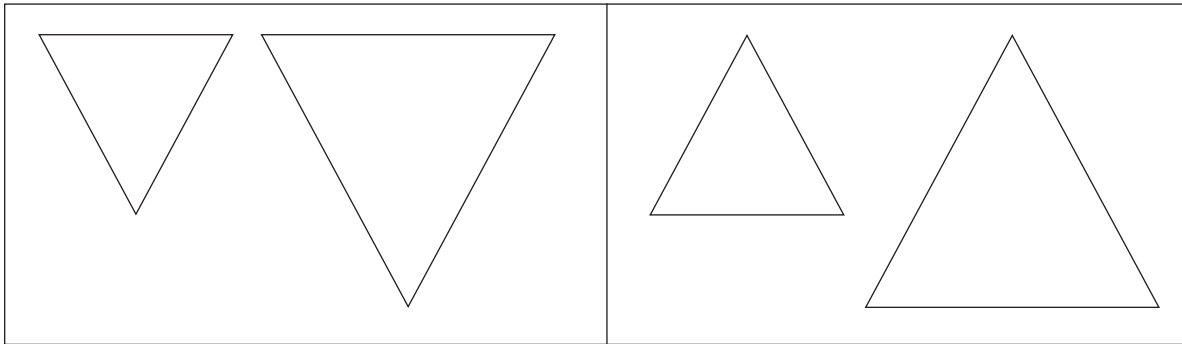


By color

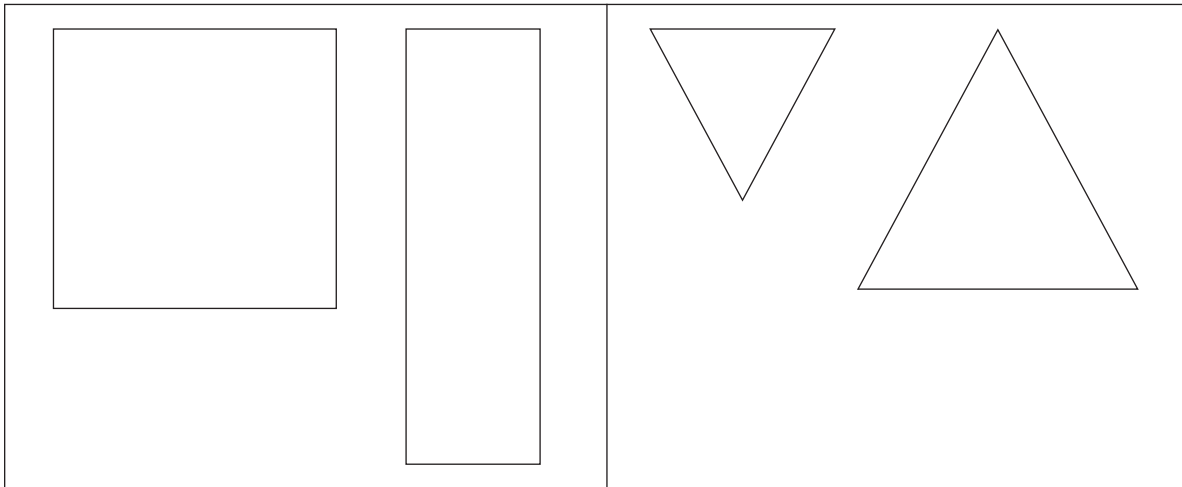




By orientation

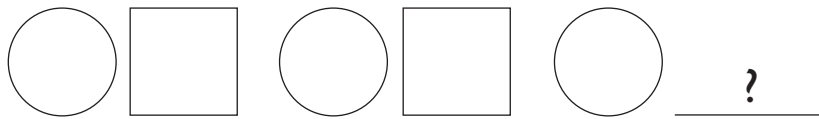


By number of sides and corners



Identifying Patterns

Look at the row of shapes below.
The shapes repeat in a certain way.
They form a pattern.



circle, square

circle, square

circle, ...

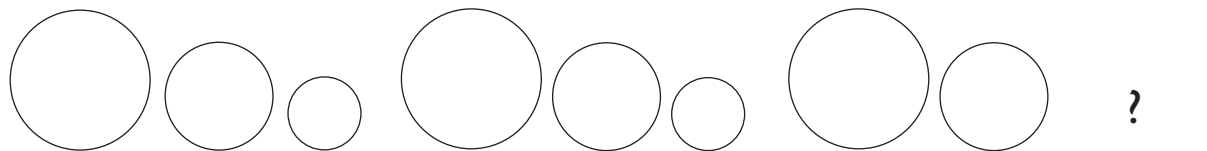
The shape that comes next is a square.

Here is another pattern of shapes.
We look at the colors of the shapes.



The shape that comes next is a gray square.

Here is another pattern of shapes.
We look at the sizes of the shapes.



The shape that comes next is the smallest circle.

Unit 8 : Length

Friendly Notes

Comparing Length

When we compare the lengths of two or more objects, we use these words:

as long as

longer than

the longest

as short as

shorter than

the shortest

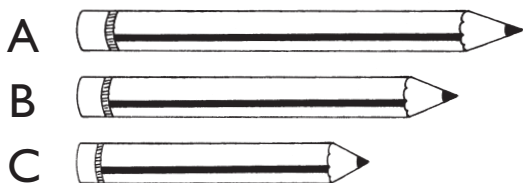
as tall as

taller than

the tallest

Do these pencils have the same length?

Let us compare their lengths.



Pencil A is **longer than** Pencil B.

Pencil C is **shorter than** Pencil B.

So, Pencil A is longer than Pencil C.

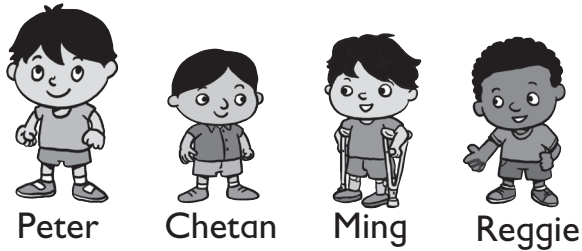
Pencil A is the **longest**.

Pencil C is the **shortest**.

Arrange the pencils from shortest to longest.

Pencil C, Pencil B, Pencil A

How tall are the boys? Let us compare how tall they are.



Chetan is **shorter than** Ming.

Ming is **taller than** Chetan.

Ming is **as tall as** Reggie.

Peter is **taller than** Chetan, Ming, and Reggie.

Peter is **the tallest** boy.

Chetan is **shorter than** Ming, Reggie, and Peter.

Chetan is **the shortest** boy.

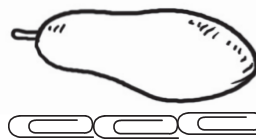
Measuring Length

We can use objects to measure length.

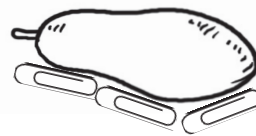
We can use paper clips to measure the length of a papaya.

Use  as 1 unit.

We measure the papaya this way.



We do not measure the papaya this way.



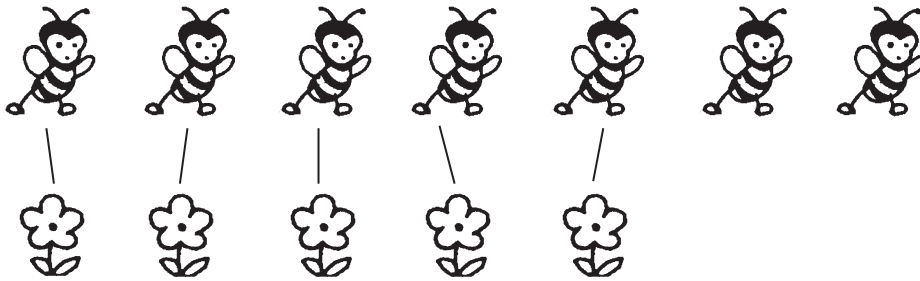
The papaya is about 3 units long.

Unit 9 : Comparing Numbers

Friendly Notes

More or Less

We can compare numbers by counting, matching, or subtracting.



There are **more** bees than flowers.

There are **fewer** flowers than bees.

How many more bees than flowers are there?

Let us subtract to find the answer.

There are 7 bees.

There are 5 flowers.

$$7 - 5 = 2$$

7 is 2 more than 5.

5 is 2 less than 7.



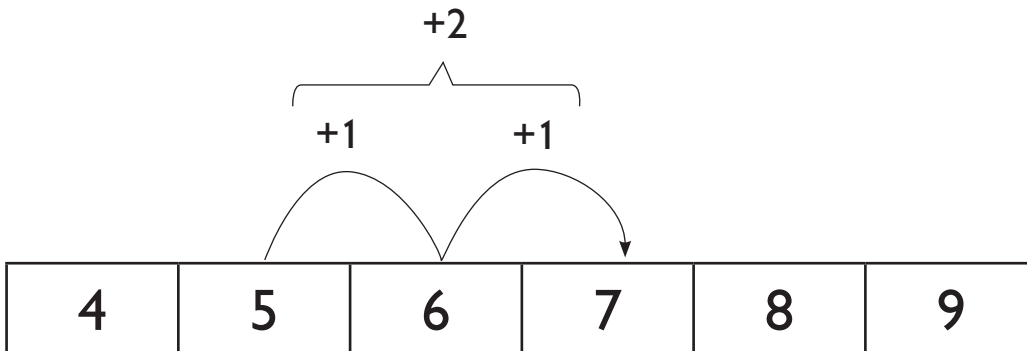
There are **2 more** bees than flowers.

There are **2 fewer** flowers than bees.

We see that:

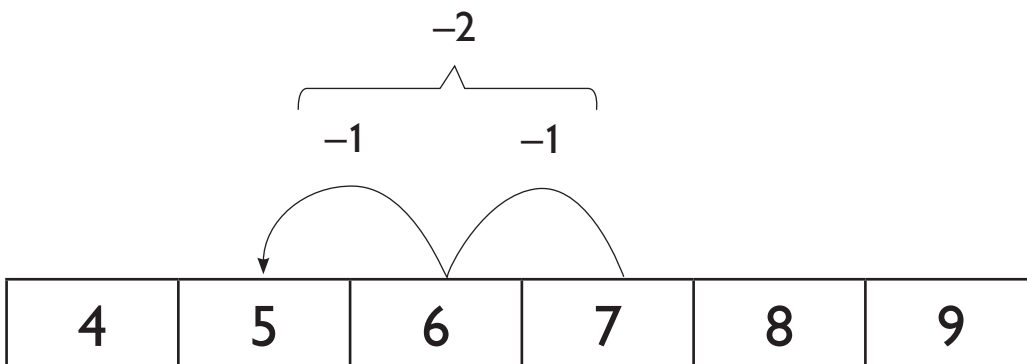
2 more than 5 is 7.

$$5 + 2 = 7$$



2 less than 7 is 5.

$$7 - 2 = 5$$



Unit 10 : Graphs

Friendly Notes

Picture Graphs




We can use picture graphs to compare the number of items.

Caleb has 7 carrots.

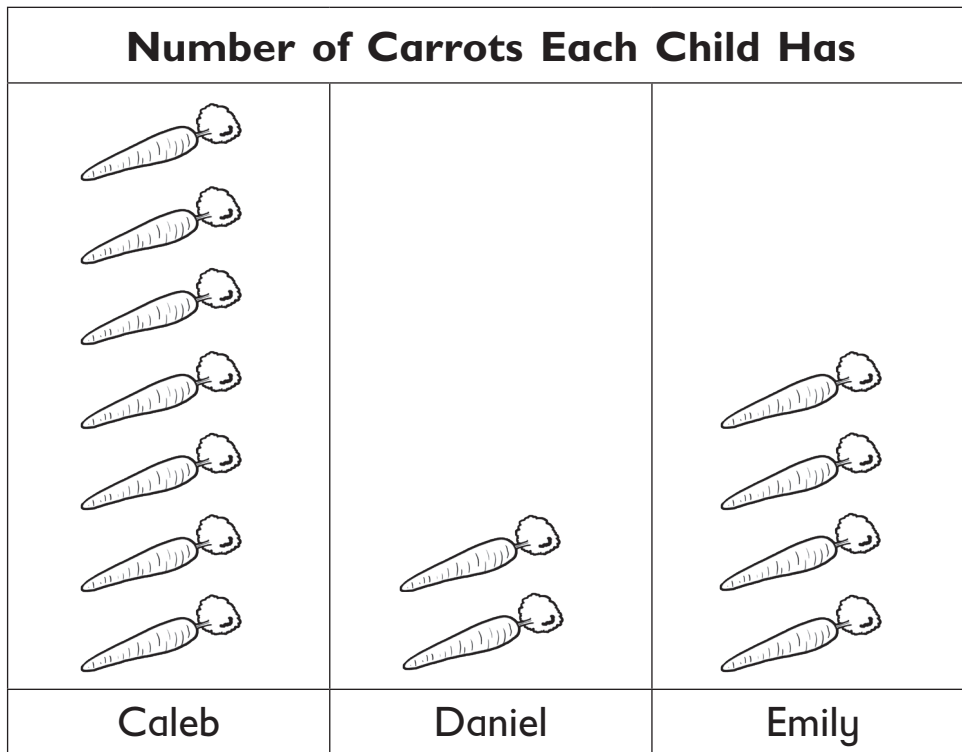
Daniel has 2 carrots.

Emily has 4 carrots.

This is how our picture graph looks:

Number of Carrots Each Child Has	
Caleb	
Daniel	
Emily	

Our picture graph may also look like this:



From the picture graph, we can tell:

Caleb has **5** more carrots than Daniel.

Daniel has **2** fewer carrots than Emily.

Emily has **3** fewer carrots than Caleb.

Caleb, Daniel, and Emily have 13 carrots altogether.

Caleb has **more** carrots than Daniel and Emily.

Caleb has the **most** carrots.




Daniel has **fewer** carrots than Caleb and Emily.

Daniel has the **least** carrots.


Tally Charts

We can also use a tally chart to show how many carrots Caleb, Daniel, and Emily have.

This is how our tally chart may look:

	Number of Carrots Each Child Has
Caleb	
Daniel	
Emily	

Each  stands for 1 carrot.


 is a group of 5.

It stands for 5 carrots.


Bar Graphs

We can also use a bar graph to show the number of carrots each child has.

This is how our bar graph looks:

Number of Carrots Each Child Has		
Caleb	Daniel	Emily
Each  stands for 1 carrot.		

Our bar graph may also look like this:

Number of Carrots Each Child Has							
Caleb							
Daniel							
Emily							
Each  stands for 1 carrot.							

From our bar graph, we can easily tell who has the most number of carrots or the least number of carrots.

Unit 11 : Numbers to 40

Friendly Notes

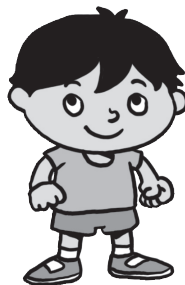
Counting

These are numbers 21 to 40.

We learn to count and write these numbers in words.

Number	Number in Words
21	twenty-one
22	twenty-two
23	twenty-three
24	twenty-four
25	twenty-five
26	twenty-six
27	twenty-seven
28	twenty-eight
29	twenty-nine
30	thirty

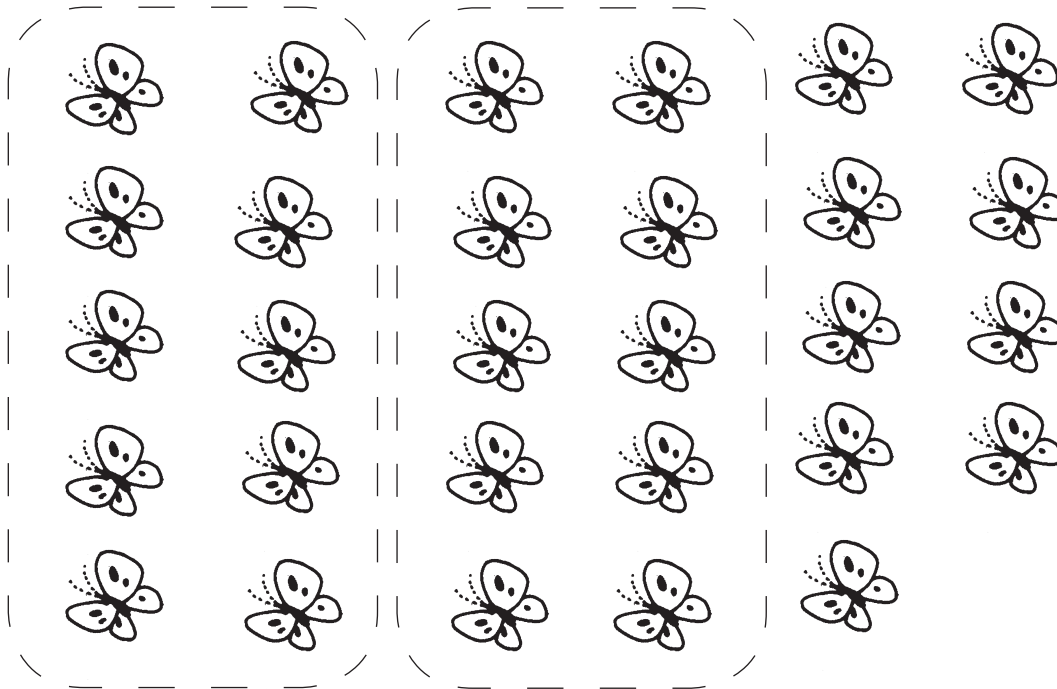
Number	Number in Words
31	thirty-one
32	thirty-two
33	thirty-three
34	thirty-four
35	thirty-five
36	thirty-six
37	thirty-seven
38	thirty-eight
39	thirty-nine
40	forty



We write 40 in words without the 'u': forty.

To count numbers more than 10, we can make groups of 10 first.

How many butterflies are there?



10, 20, 21, 22, 23, 24,
25, 26, 27, 28, 29.

29 is 20 and 9.

$$20 + 9 = 29$$

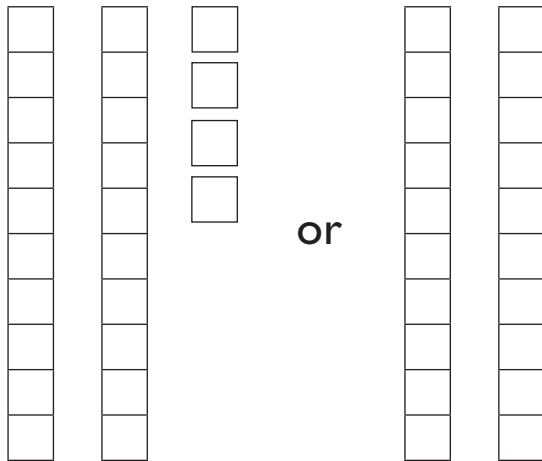
There are 29 butterflies.



Tens and Ones

We can count and write numbers in tens and ones.
It is easy to compare numbers written as tens and ones.

(a) Which is smaller, 24 or 20?



24 is 4 more than 20.



24 = 2 tens 4 ones

20 = 2 tens

20 is smaller.

(b) Circle the smallest number.
Underline the greatest number.

15

20

24

37

15 is 1 ten and 5 ones.

20 is 2 tens.

24 is 2 tens and 4 ones.

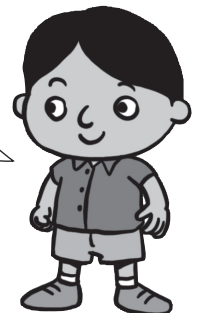
37 is 3 tens and 7 ones.

1 ten is the smallest.

15 is the smallest number.

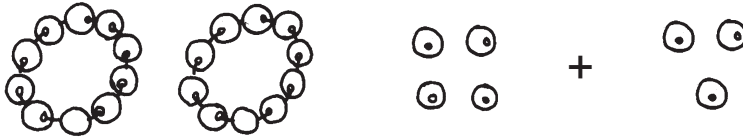
3 tens is the greatest.

37 is the greatest number.



Addition Within 40

(a) $24 + 3 = ?$



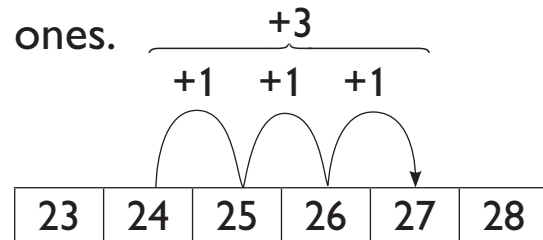
Step 1: Add the ones first.

Add 4 ones and 3 ones.

$$4 + 3 = 7$$

Step 2: Add 20 and 7.

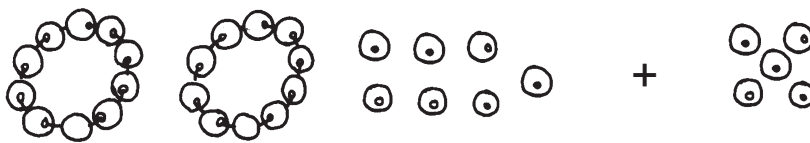
$$20 + 7 = 27$$



So, $24 + 3 = 27$.

To add bigger numbers, we can make a 10 first.

(b) $27 + 5 = ?$

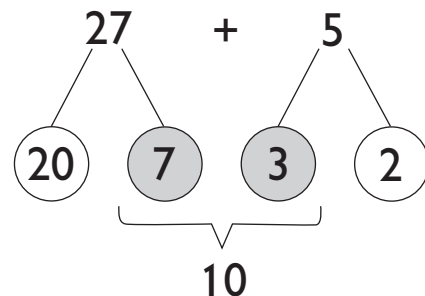


Step 1: Add 27 and 3.

$$27 + 3 = 30$$

Step 2: Add 30 and 2.

$$30 + 2 = 32$$

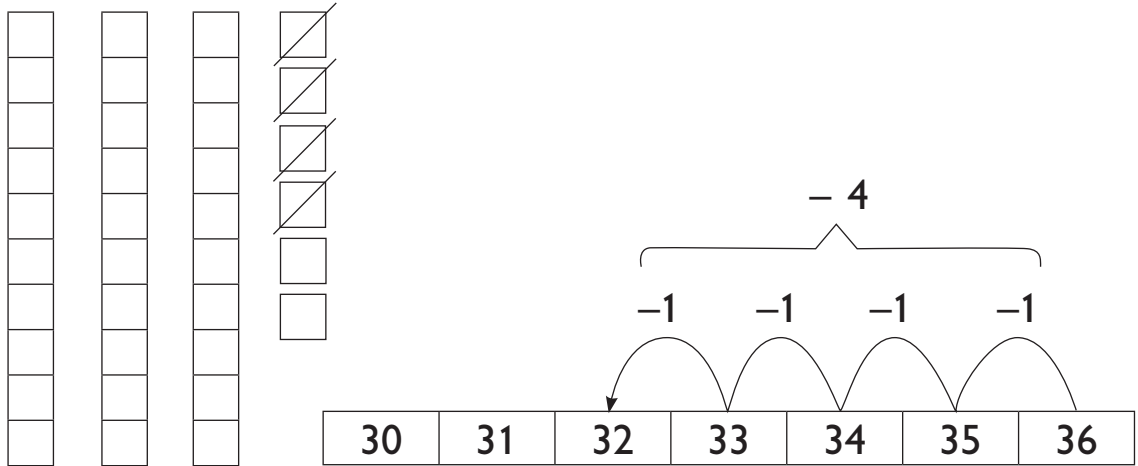


So, $27 + 5 = 32$.

Subtraction Within 40

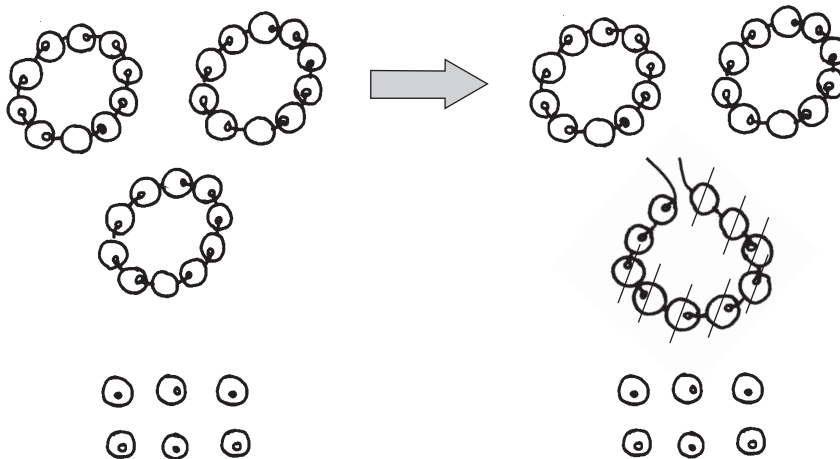
(a) $36 - 4 = ?$

We subtract the ones.



(b) $36 - 8 = ?$

We cannot take away 8 ones from 6 ones.
So, we take away from the tens.



$$\begin{array}{r} 36 \\ - 8 \\ \hline \end{array} = 28$$

The diagram shows the number 36 in a circle, with lines connecting it to two other circles containing the numbers 26 and 10. A dashed line encloses the 26 and 10 circles, indicating the decomposition of 36 into 20 and 6, which is then used to subtract 8.

Adding Three Numbers

There are different ways to add three or more numbers.

(a) $4 + 5 + 1 = ?$

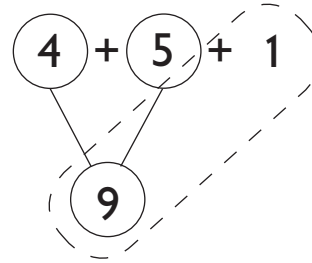
Add 4 ones and 5 ones.

$$4 + 5 = 9$$

Then we add 9 and 1.

$$9 + 1 = 10$$

So, $4 + 5 + 1 = 10$.

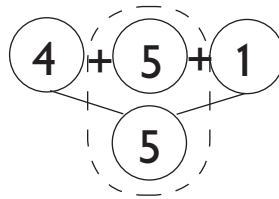


OR

$$4 + 1 = 5$$

$$5 + 5 = 10$$

$$4 + 5 + 1 = 10$$



(b) $7 + 5 + 8 = ?$

We can make a 10 first.

Add 5 ones and 5 ones.

$$5 + 5 = 10$$

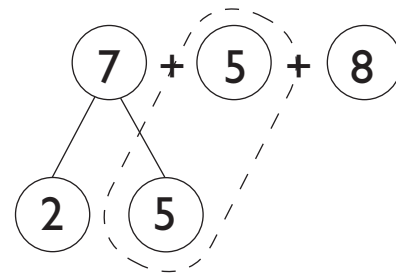
Next we add 2 and 10.

$$2 + 10 = 12$$

Then we add 12 and 8.

$$12 + 8 = 20$$

So, $7 + 5 + 8 = 20$.



We can add in any order:

$$7 + 5 + 8 = 20$$

$$8 + 5 + 7 = 20$$

$$5 + 7 + 8 = 20$$



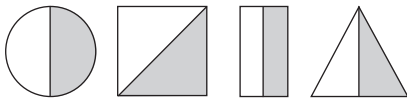
Unit 14 : Halves and Fourths

Friendly Notes

Halves

Half is 1 of 2 **equal** parts.
2 halves make **one whole**.

Each shape is divided into 2 equal parts.
Each part is a half.
Half of each shape is shaded.

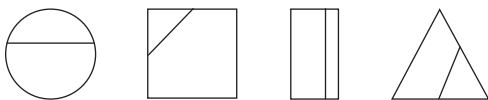


+ make one whole square.

is half of .

is also half of .

Each shape is divided into 2 parts.
The parts are **not equal**.
Each part is **not** a half.





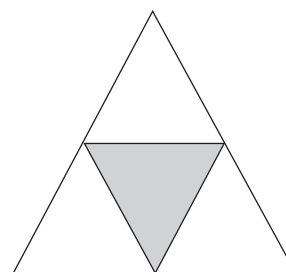
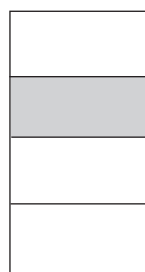
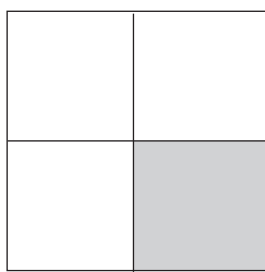
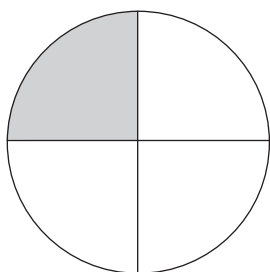
Fourths

A **fourth** or a **quarter** is 1 of 4 **equal** parts.
4 fourths or 4 **quarters** make **one whole**.

Each shape is divided into 4 equal parts.

Each part is a fourth.

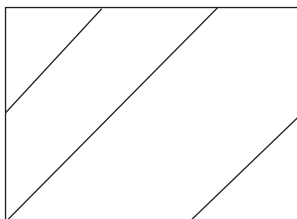
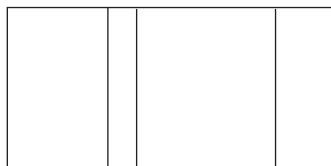
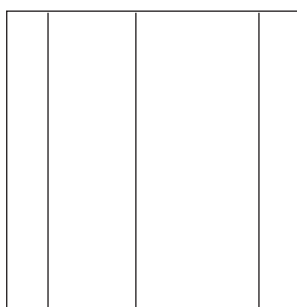
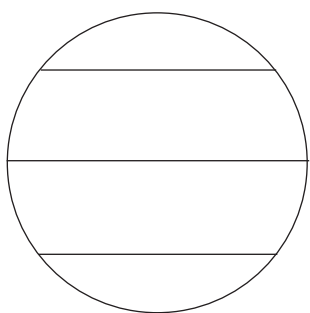
A fourth of each shape is shaded.



Each shape is divided into 4 parts.

The parts are **not equal**.

Each part is **not** a fourth.



Unit 15 : Time

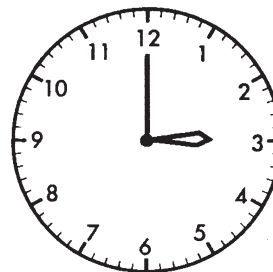
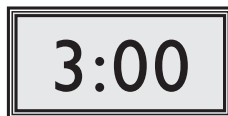
Friendly Notes

Telling and Estimating Time

We can tell the time by looking at the numbers on these clocks.

It is **3 o'clock**.

It is 3:00.



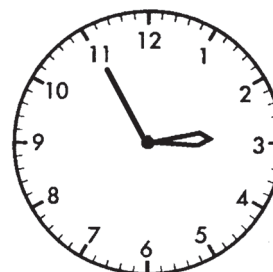
It is **not** 3 o'clock yet.

It is **almost** 3 o'clock.

It is **about** 3 o'clock.

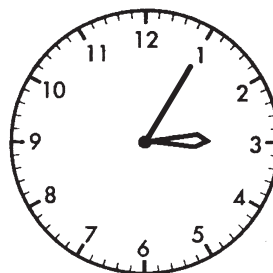
It is **close** to 3 o'clock.

It is a **little before** 3 o'clock.



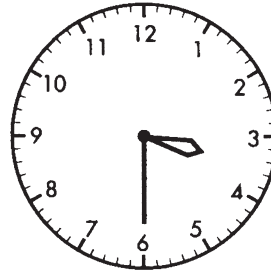
It is **after** 3 o'clock.

It is a **little after** 3 o'clock.



It is **half past 3**.

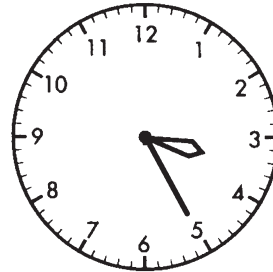
It is 3:30.



It is not half past 3 yet.

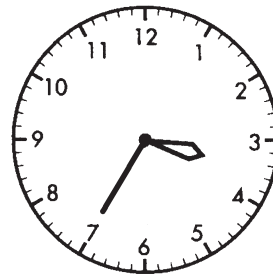
It is almost half past 3.

It is a little before half past 3.

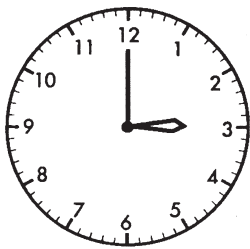


It is about half past 3.

It is a little after half past 3.



Study these clocks. What time is it?

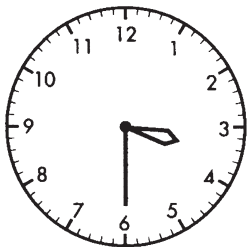


The time is 3:00.



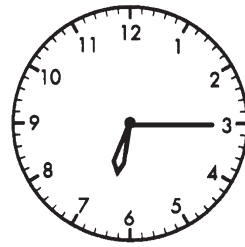
The time is not 3:00.

It is after 12:00.



3:30

The time is 3:30.



The time is not 3:30.

It is after 6:00.

Unit 16 : Numbers to 120

Friendly Notes

Counting

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

Number	101	102	103	104	105	106	107	108	109	110
Number in words	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

Number	111	112	113	114	115	116	117	118	119	120
Number in words	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

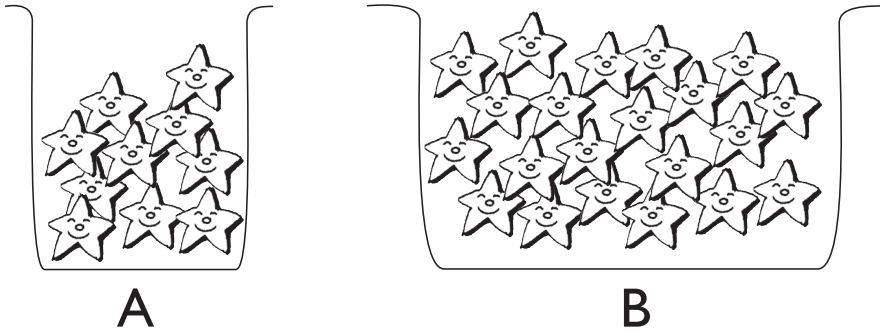
105 — one hundred

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.

$90 > 34$

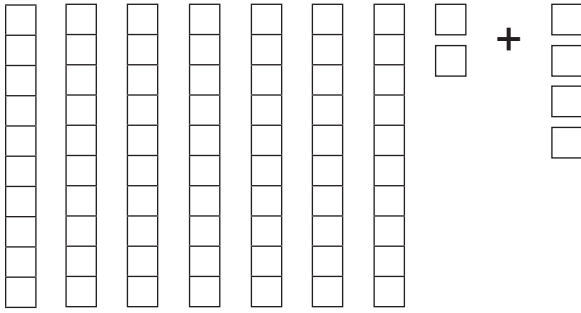
54 is less than 59.

$54 < 59$

Addition Within 100

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

$$72 + 4 = ?$$

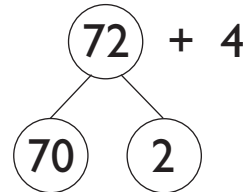


Count on 4 ones from 72: 73, 74, 75, 76



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

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

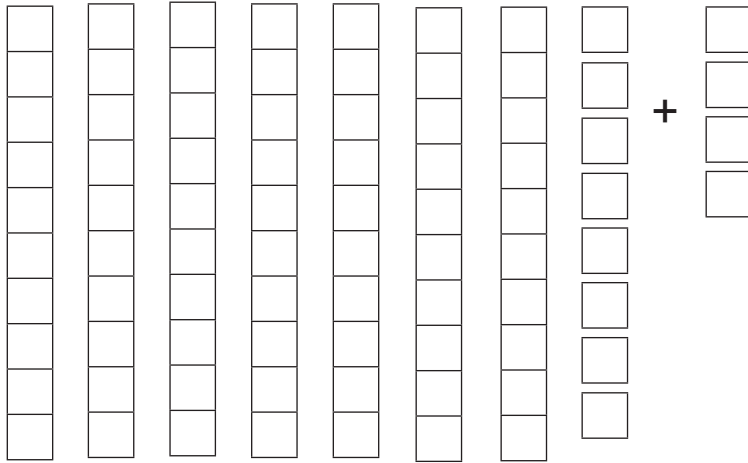
Add the tens.
7 tens + 0 ones
= 7 tens

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.

$$78 + 4 = ?$$

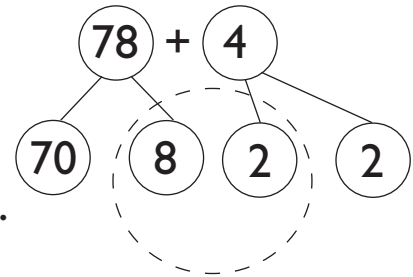


Step 1: Add 8 ones and 2 ones.

$$8 + 2 = 10$$

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

$$70 + 10 + 2 = 82$$



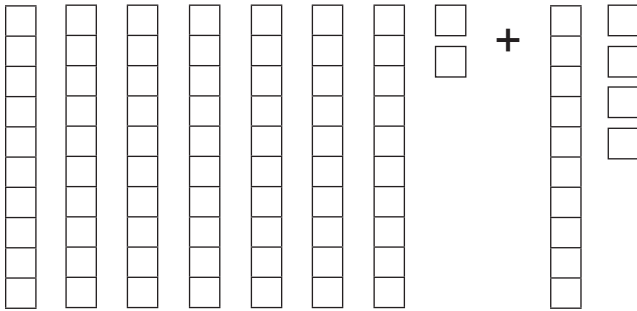
So, $78 + 4 = 82$.

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



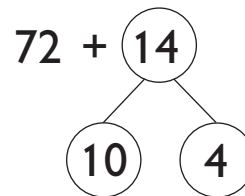
To add two 2-digit numbers, we can add the tens first.

$$72 + 14 = ?$$



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.

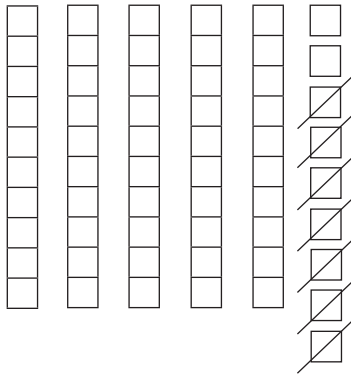
$$\begin{array}{l} 7 \text{ tens} + 1 \text{ ten} \\ = 8 \text{ tens} \end{array}$$



Subtraction Within 100

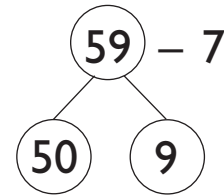
To subtract a 1-digit number from a 2-digit number, we can count backwards or subtract with number bonds.

$$59 - 7 = ?$$



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.

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

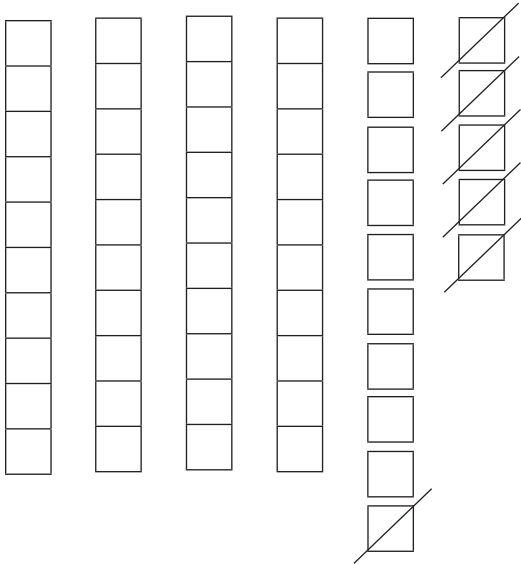
$$\begin{array}{r} 59 \\ - 7 \\ \hline 52 \end{array}$$

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.

$$55 - 6 = ?$$



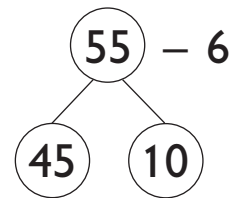
5 ones is less than 6 ones.

We cannot take away 6 ones from 5 ones.

We change 1 ten into 10 ones.

Step 1: Subtract 6 from 15.

$$10 - 6 = 4$$



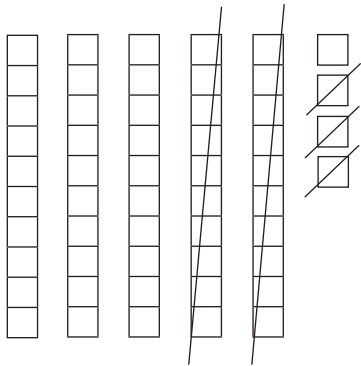
Step 2: Add 45 and 4.

$$45 + 4 = 49$$

So, $55 - 6 = 49$.

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

$$54 - 23 = ?$$



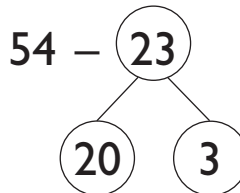
Step 1: Subtract 20 from 54.

$$54 - 20 = 34$$

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











Unit 17 : Money


Friendly Notes

Value of Money


These are the coins and bills we use in the US.
We talk about the value of coins in cents (¢) and the value of bills in dollars (\$).

Value of 1 coin/bill		We can change 1 of this for	How do we know this?
penny 	1¢	—	—
nickel 	5¢	5 pennies	Value of 5 pennies $= 1¢ + 1¢ + 1¢ + 1¢ + 1¢$
dime 	10¢	10 pennies OR 2 nickels	Value of 10 pennies $= 1¢ + 1¢ + 1¢ + 1¢ + 1¢ + 1¢ + 1¢ + 1¢ + 1¢ + 1¢$ Value of 2 nickels $= 5¢ + 5¢$
quarter 	25¢	25 pennies OR 5 nickels OR 2 dimes and 1 nickel	Value of 5 nickels $= 5¢ + 5¢ + 5¢ + 5¢ + 5¢$ Value of 2 dimes and 1 nickel $= 10¢ + 10¢ + 5¢$

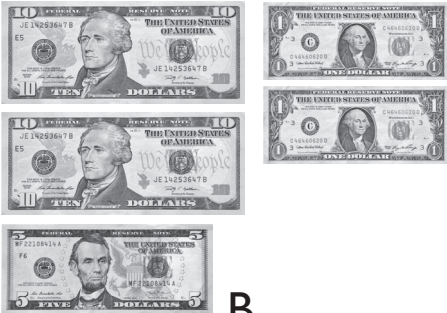
<p>half-dollar</p> 	50¢	<p>50 pennies</p> <p>OR</p> <p>10 nickels</p> <p>OR</p> <p>5 dimes</p> <p>OR</p> <p>2 quarters</p>	<p>Value of 10 nickels</p> $= 5¢ + 5¢ + 5¢ + 5¢ + 5¢ + 5¢ + 5¢ + 5¢ + 5¢ + 5¢$ <p>Value of 5 dimes</p> $= 10¢ + 10¢ + 10¢ + 10¢ + 10¢$ <p>Value of 2 quarters</p> $= 25¢ + 25¢$
<p>one dollar</p> 	\$1	2 half-dollars	<p>Value of 2 half-dollars</p> $= 50¢ + 50¢$
<p>five dollars</p> 	\$5	5 one-dollar bills	<p>Value of 5 one-dollar bills</p> $= \$1 + \$1 + \$1 + \$1 + \$1$
<p>ten dollars</p> 	\$10	<p>10 one-dollar bills</p> <p>OR</p> <p>2 five-dollar bills</p>	<p>Value of 2 five-dollar bills</p> $= \$5 + \5

<p>twenty dollars</p> 	\$20	<p>20 one-dollar bills</p> <p>OR</p> <p>2 ten-dollar bills</p> <p>OR</p> <p>4 five-dollar bills</p>	<p>Value of 2 ten-dollar bills = \$10 + \$10</p> <p>Value of 4 five-dollar bills = \$5 + \$5 + \$5 + \$5</p>
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How much money is there?
Which set has a greater amount of money?



A



B

We add the **value** of the bills in each set, and **not the number of bills** in each set.

Set A has \$9.
Set B has \$27.

Set B has a greater amount of money.



We add or subtract to find the cost of things or how much more they cost than others.

Gwen has \$15.

She wants to buy a doll and a toy drum.



- (a) Which costs more? How much more?
- (b) How much do the doll and toy drum cost altogether?
- (c) How much more money does Gwen need to buy the doll and the toy drum?

- (a) The doll costs more than the toy drum.
Subtract \$8 from \$10.

$$10 - 8 = 2$$

The doll costs \$2 more than the toy drum.

The toy drum costs \$2 less than the doll.

The doll is more expensive than the toy drum.

The toy drum is cheaper than the doll.

- (b) $10 + 8 = 18$
They cost \$18 altogether.

- (c) $18 - 15 = 3$
Gwen needs \$3 more.