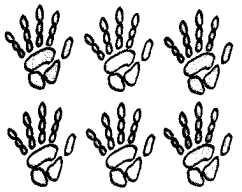
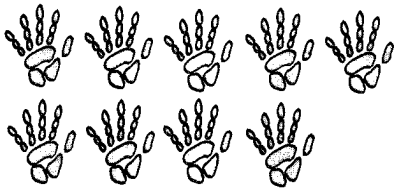
10. Look at the picture graph below. It shows the children who took part in a charity concert. Fill in the blanks.

Girls		
Boys		
	Wear glasses	Do not wear glasses

Each  stands for 1 child.

(a) ☐ children wear glasses.

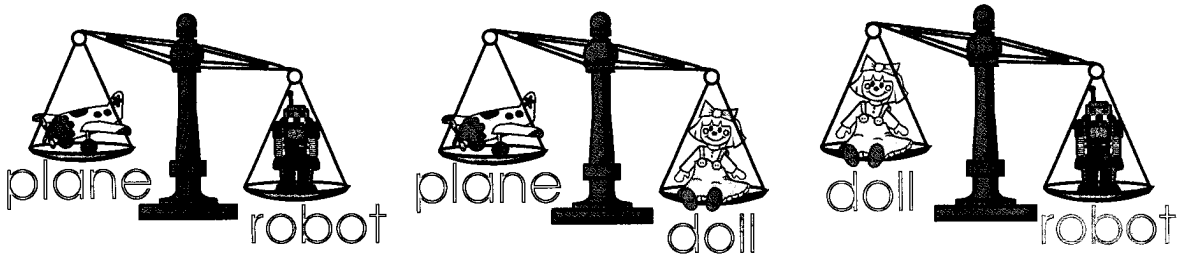
(b) ☐ boys do not wear glasses.

(c) ☐ girls wear glasses.

(d) ☐ boys and ☐ girls do not wear glasses.

(e) ☐ boys and ☐ girls took part in the charity concert.

7. Look at the picture and arrange the toys from the heaviest to the lightest.



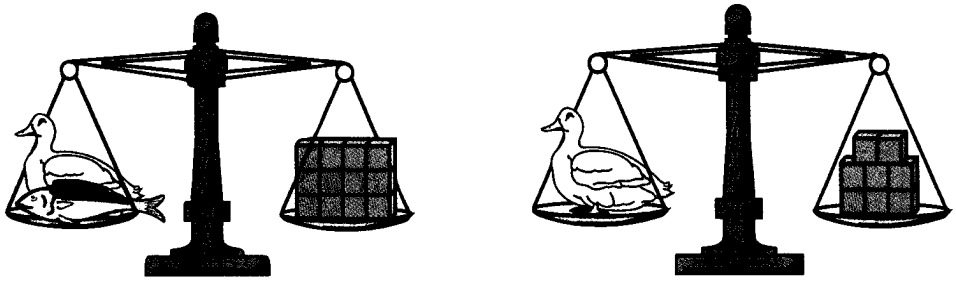
_____, _____, _____

heaviest lightest

8. How much change will Dan get?

	He buys	He pays	His change
(a)	 $12	  $15	
(b)	 10¢	 25¢	

9. What is the mass of the fish?



The mass of the fish is _____ blocks.

6. Look at the table below and fill in the blanks.

MENU	
Snacks	**Drinks (per glass)**
Steamed bun  25¢	Soft drink  25¢
Hot dog  40¢	Fruit juice  45¢
Sandwich  50¢	
Cake (1 slice)  15¢	Milk  35¢

(a) Al paid 60¢. He ate a steamed bun and drank a glass of _____.

(b) Devi paid 85¢. She had a _____ and a glass of milk.

(c) Sarah spent more money than Devi. She ate a sandwich and drank a glass of _____.

Exercise 12

5. This table shows the number of pupils playing games during break time. Complete the picture graph.

Game	Tally (number of pupils)
'Police and Thieves'	𝍸 I
Hopscotch	𝍸
Basketball	𝍸 I
Skipping	𝍸 II
Hide-and-seek	𝍸 III

Each ○ stands for 1 pupil.

'Police and Thieves'	Hop-scotch	Basketball	Skipping	Hide-and-seek

3. This picture graph shows the number of hats that four children made for a class party.

Kelvin	
Mei Ling	
Mary	
Tony	

(a) Kelvin made ☐ hats more than Mary.

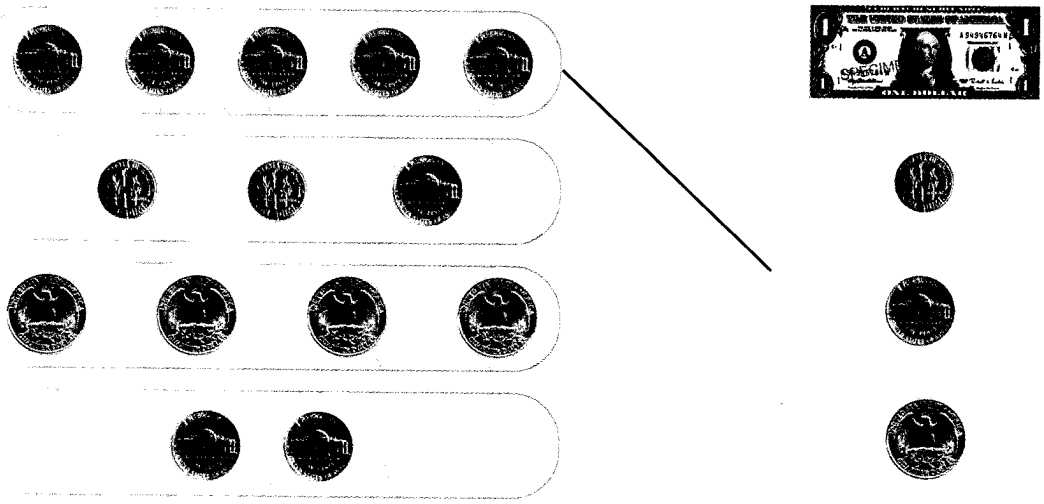
(b) Mei Ling made ☐ hats less than Fandi.

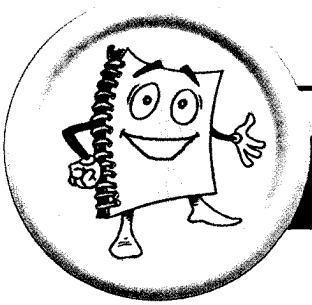
(c) Mary and Tony made ☐ hats altogether.

(d) _____ made the most number of hats.

(e) _____ made the least number of hats.

4. Match each set of coins with a coin of equal value.





REVISION 2

Exercise 1

1. Fill in the table.

Number	Number in words	Tens	Ones
		5	8
37			
	Nine		
12			
		7	19
100			

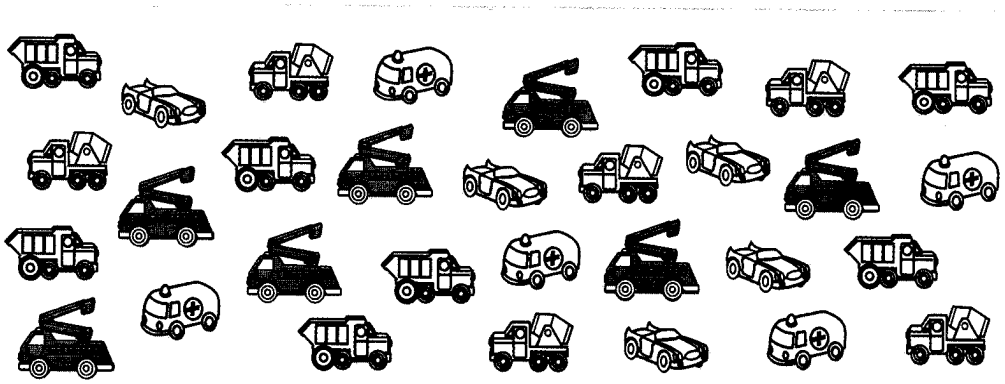
2. Look at the picture. Then write 'heavier than' or 'lighter than' in the blanks.

(a) Ahmed is _____ Andy.

(b) Jane is _____ Sarah.

Practice 8B

1. John has some toys. Color the same kind of toys with the same color. For example, color the fire engines red. Then use the same color to fill in the boxes on the graph.



John's model toys

ambulance							
fire engine							
cement mixer							
truck							
racing car							

(a) Tick the row with the most number of toys.

(b) Put a cross by the row with the least number of toys.

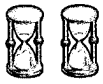
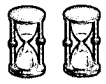
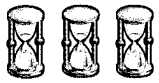
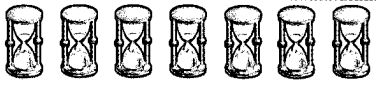
(c) Which toy has the same number as the ambulance?

Make a picture graph from your timetable.

For example:

Andy has 1 period of American History, 2 periods of Art and Crafts, 2 periods of Music, 3 periods of P. E. and 7 periods of Mathematics every week.

If  stands for one period, his picture graph will look like this:

American History	
Art and Crafts	
Music	
P.E.	
Mathematics	

You can make picture graphs about other things like your classmates' favorite subjects, food, or types of ice-cream.

You may draw pictures, use pictures from magazines, or cut out shapes from colored paper to make a picture graph.

Let's Learn

Making picture graphs

Mr. Smith asked each pupil in his class to use a tally (|) to choose a favorite game from these five: hop-scotch, 'tag', jump rope, basketball, and hide-and-seek.

This is what he found out:

Game	Tally	Number
hop-scotch	𝍸 ||	7
hide-and-seek	𝍸 |	6
'tag'	𝍸 |||	8
basketball	𝍸 |||	8
jump rope	𝍸 |	6

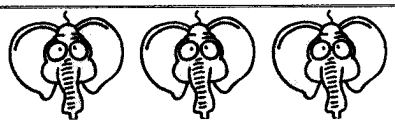
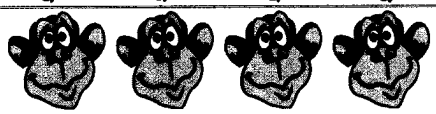
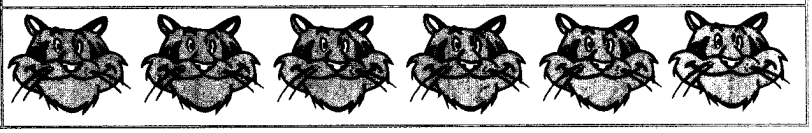
This is the picture graph of what Mr. Smith found out. He used ○ to stand for 1 pupil.

○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○
hop-scotch	hide-and-seek	'tag'	basketball	jump rope

Practice 8A

1. Fill in the blanks.

Animals At The Zoo

Elephant	
Lion	
Monkey	
Zebra	
Rhinoceros	
Tiger	

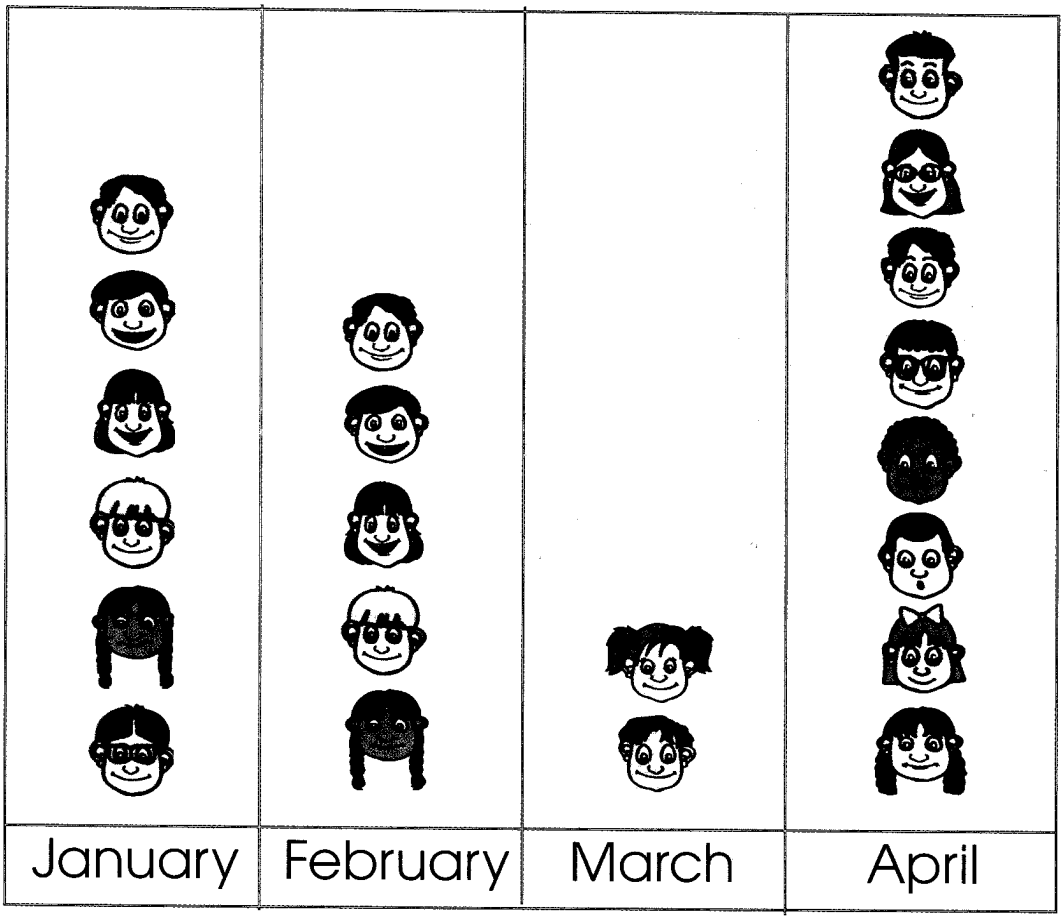
(a) There are ☐ tigers.
There are ☐ zebras.

(b) There are ☐ more lions than monkeys.
There are ☐ fewer lions than tigers.
There are the same number of
_____ as _____.

(c) There are ☐ animals altogether.

Some children were asked to draw their faces on this picture graph to show the months of their birthdays.

Our Birthdays



(a) ☐ children have their birthdays in April.

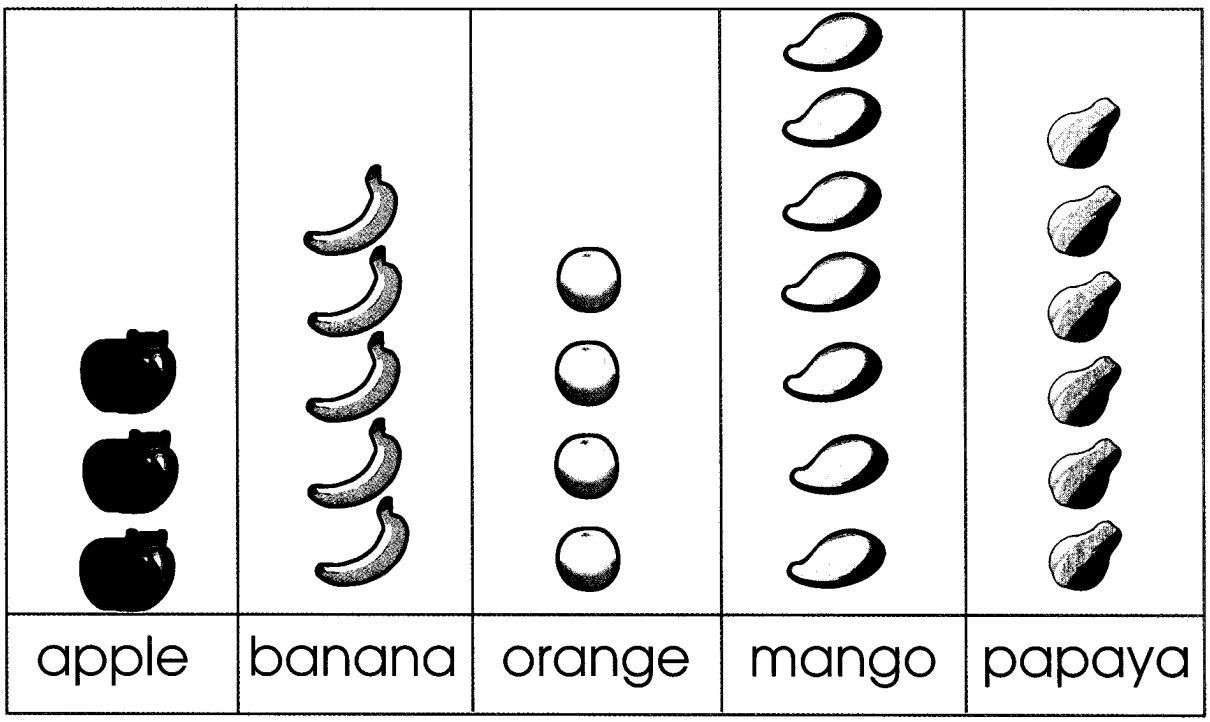
(b) ☐ more children have their birthdays in April than in March.

(c) ☐ fewer children have their birthdays in February than in April.

After each pupil has chosen a favorite fruit, make a drawing of the fruit in the graph.

For example:

Our Favorite Fruits



apple	banana	orange	mango	papaya

Look at your picture graph.

How many of each fruit are there?

Which is the most popular fruit?

Which is the least popular fruit?

How many more pupils prefer mango to papaya?

How many fewer pupils like oranges better than bananas?

Do You Know?

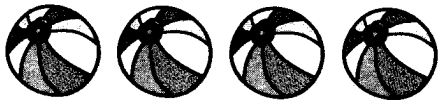
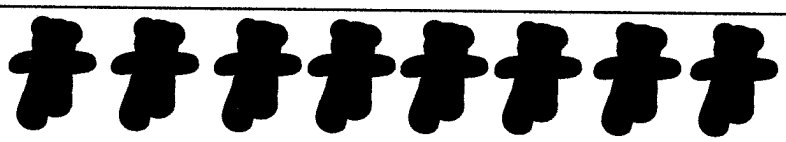
Do you know how to show the number of each toy in the shelf without using numbers?

Let's Learn

Picture graphs

We can collect the toys and arrange them in this way.

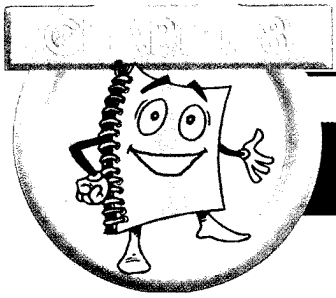
Our Toys

ball	
car	
toy bear	

This is a picture graph.
It shows how many of each kind of toy there are.

In-Class Activity

Find out which is the favorite fruit in your class.
Choose a favorite from these 5 fruits:
apple, banana, orange, mango and papaya.



PICTURE GRAPHS

Look at the photograph.

Can you tell how many toy cars there are?
How many toys are there in the wooden shelf?

(b) Jane paid  to buy one item.

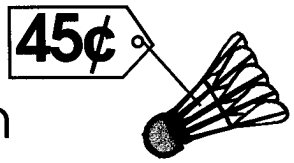
What did she buy?
Ring the correct coins to show the amount of change she received.

(c) Siti paid  to buy one item.

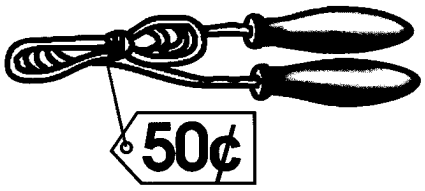
What did she buy?
Ring the correct amount of money to show the change she received.

Practice 7B

1. Fill in the missing amounts.



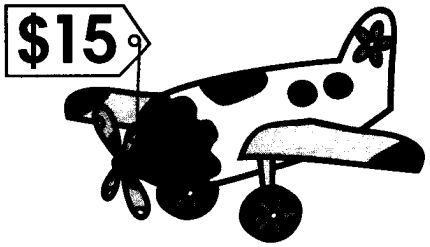
(a) How much money does Alison need to buy these two items?



☐ + ☐ = ☐

She needs ☐.

(b) Andy has $8. He wants to buy this toy aeroplane. How much more money does he need?



☐ − ☐ = ☐

He needs ☐.

2.

(a) Ravi paid  . What did he buy?

Ring the correct coins to show the amount of change he received.

Let's Learn

Counting on to give change

We count on from the cost to get the amount given.

55 cents
item

+

5 cents
change

=

60 cents
amount given

55 cents
item

+

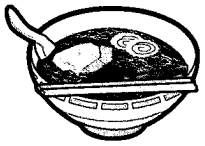
15 cents
change

=

70 cents
amount given

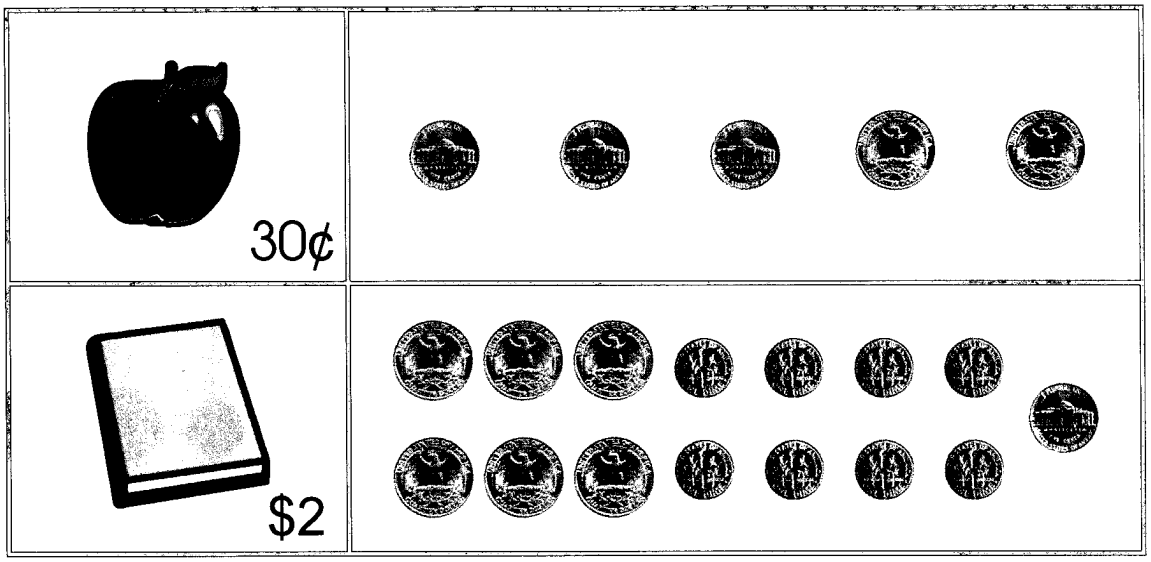
Let's Try

These are the items Al buys during lunch break.
Find out how much change he receives.

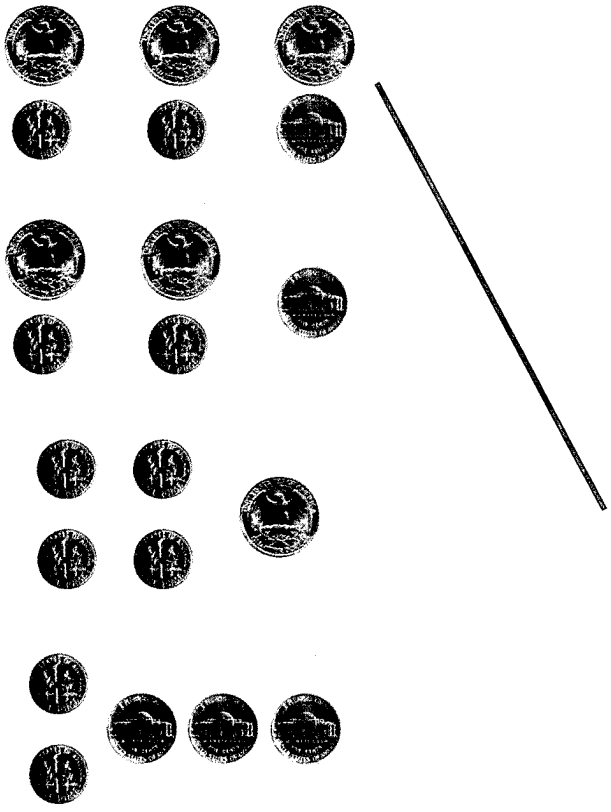
He buys	He pays	His change
 60¢		
 70¢		
 25¢		

Practice 7.A

1. Ring the correct amount of money.



2. Match.



sixty-five cents

thirty-five cents

one dollar

seventy-five cents

2. How much money is there in each set of money?

(a) 

(b) 

3. Fill in the missing numbers. Refer to the charts on pages 69 and 70 for help.

(a) one $1 note = ☐ dimes

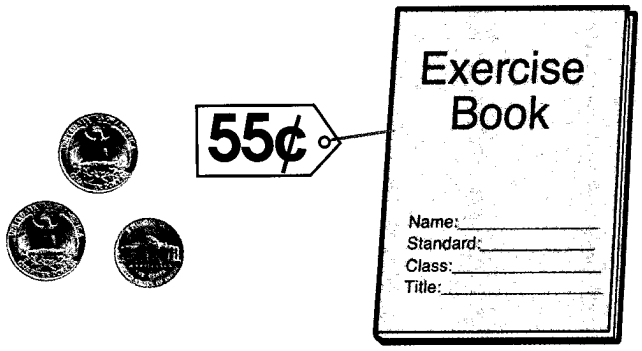
(b) one 50¢ coin = ☐ dimes

(c) one 20¢ coin = ☐ dimes

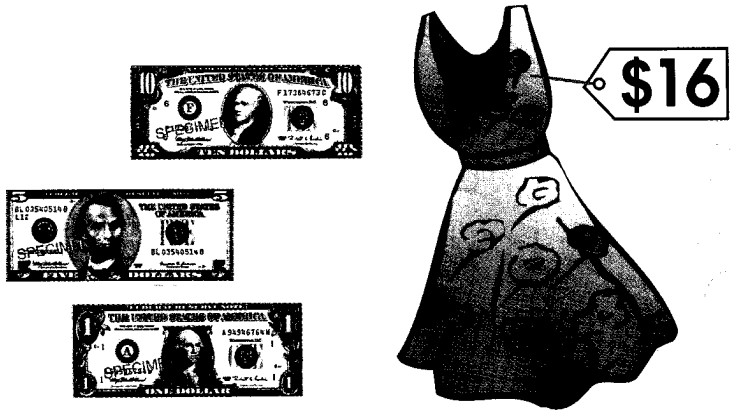
(d) one 20¢ coin = ☐ nickels

(e) one $1 note = ☐ quarters

Al paid this amount of money for an exercise book.
The exercise book costs 55¢.

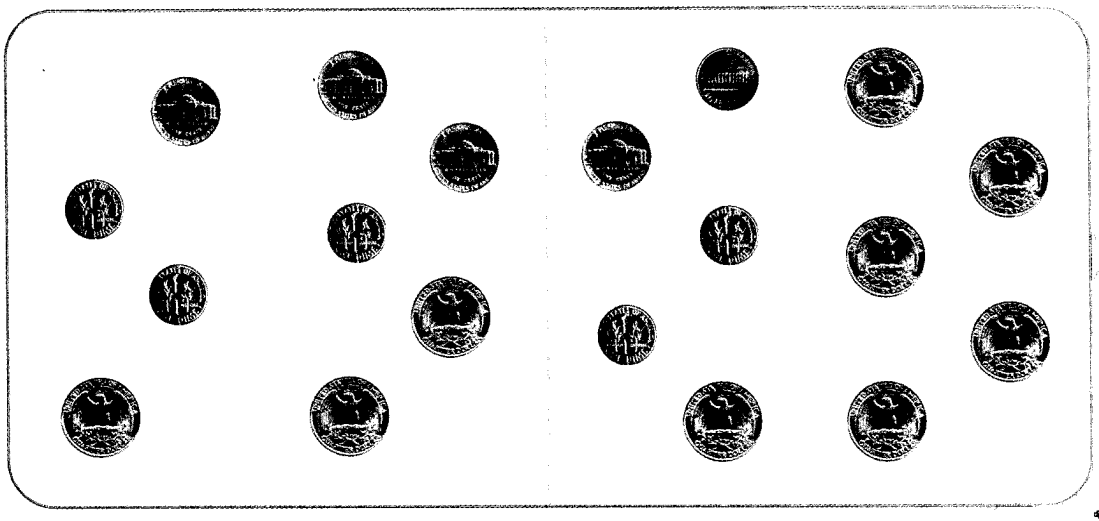


Mary paid this amount of money for a dress.
The dress costs $16.

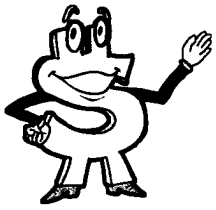


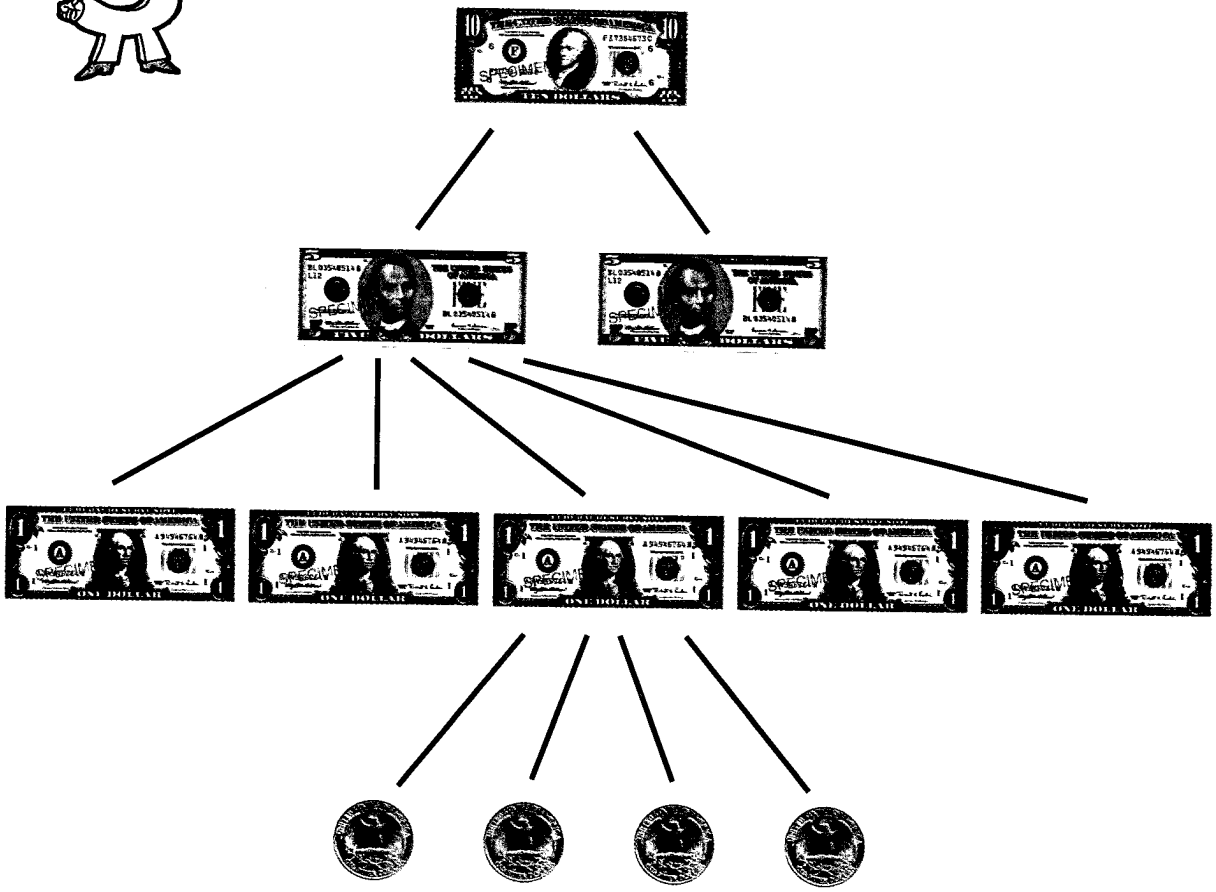
Let's Try

1. How much money is there in each set of coins?



Notes: Fill in the blanks.

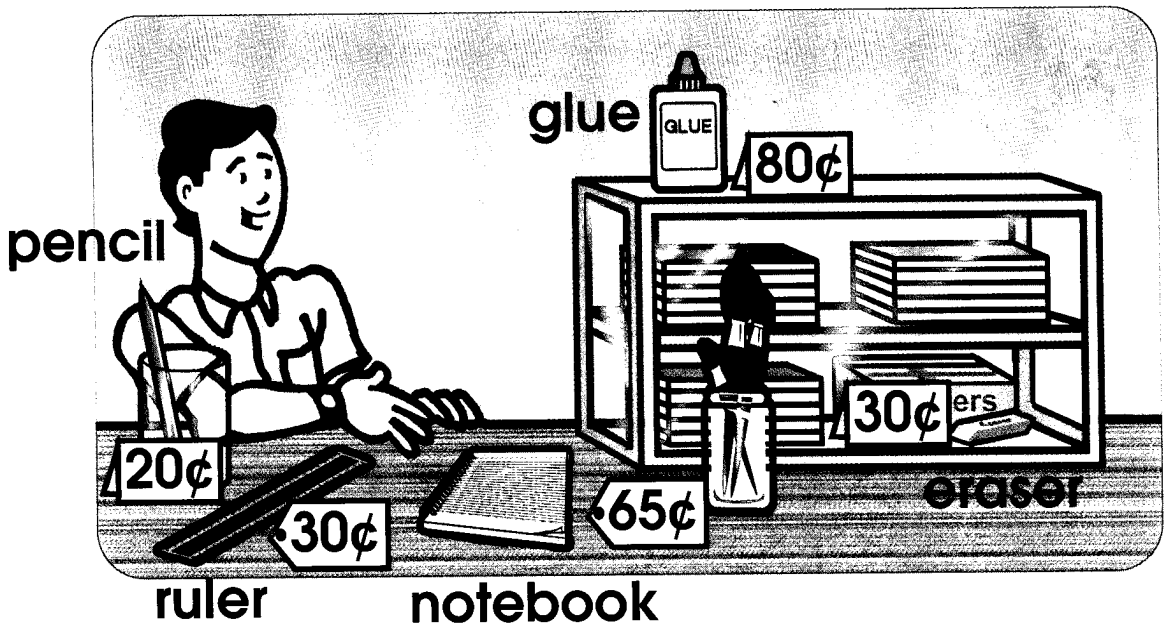




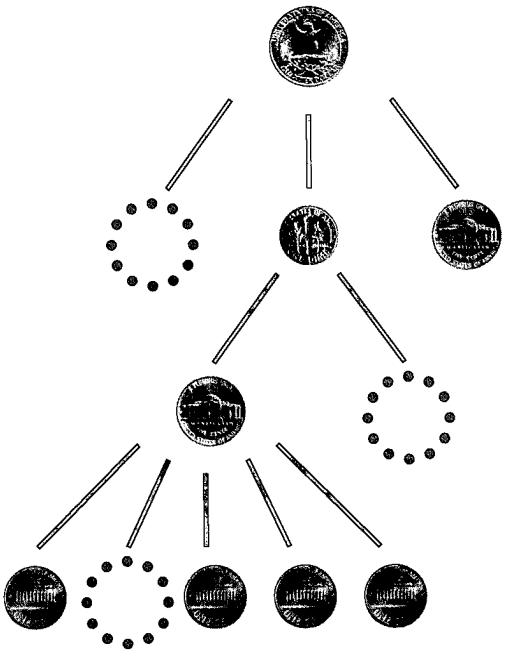
A 10-dollar note can be changed for ☐ 1-dollar notes.

A 5-dollar note can be changed for ☐ quarters.

(b) the class stationery:



Let's Learn

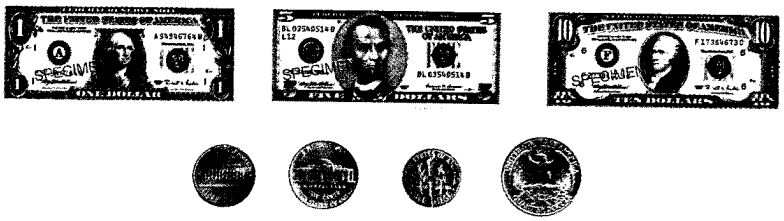


Coins: Put the right coins in the place of the missing coins.

A quarter can be changed for ☐ nickels.

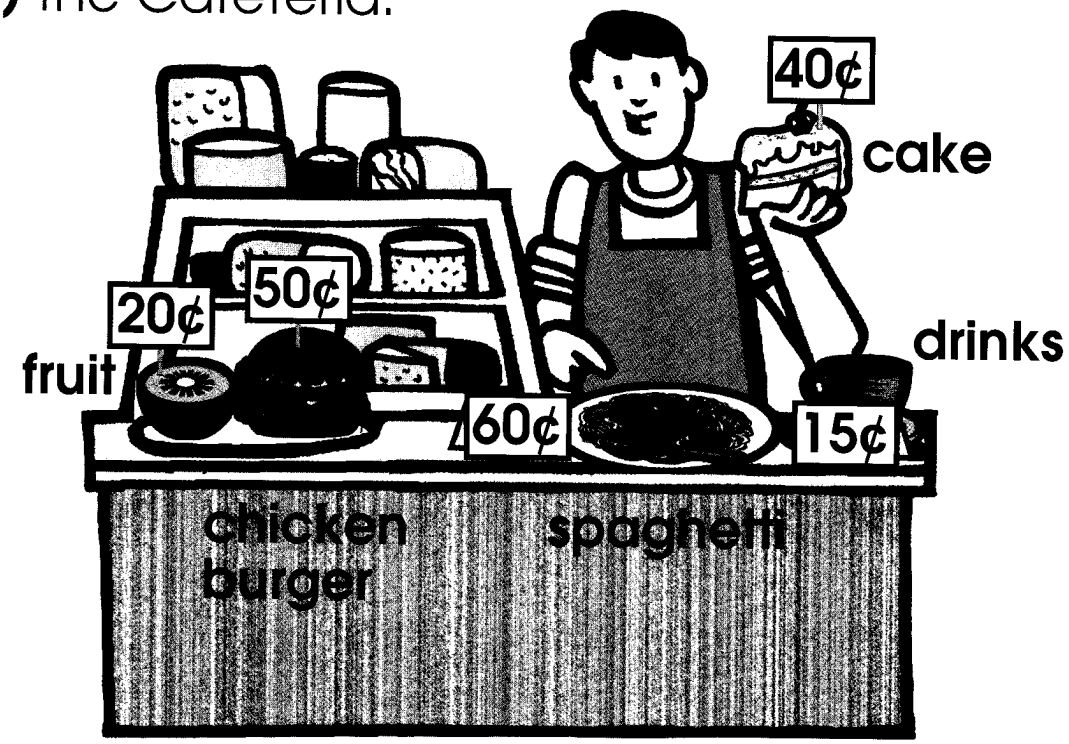
Do You Know?

Numbers are used in the dollar notes and coins of the U.S.A. Can you tell which numbers are used?



In-Class Activity

1. Trace and make your own paper coins.
2. Use the right amount of 'coins' to buy the following items from the following places:
   (a) the Cafeteria:



CHAPTER 7

MONEY

Money is used in our daily lives.

78 − 32 = ☐

8 30

7 tens and 8 ones make 78.
3 tens and 2 ones make 32.

Subtract the tens first. ☐ − 30 = ☐

Now subtract the ones. 8 − ☐ = ☐

☐ tens and ☐ ones make ☐.

So, 78 − 32 = ☐

Can you count backwards on the number board to get the answer?

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

Practice 6C

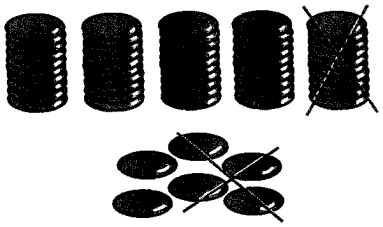
1. Subtract 3 from each of the following numbers.

(a) 48 **(b)** 57 **(c)** 73 **(d)** 90

2. Do these.

(a) 71 − 9 **(b)** 31 − 4 **(c)** 65 − 13

Let's subtract 14 from 56.



56 – 14 =

50 6 10 4

56 is 5 tens and 6 ones.
14 is 1 ten and 4 ones

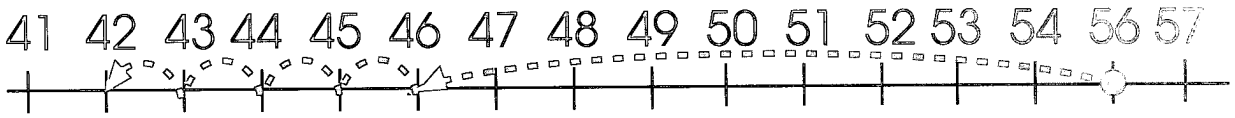
We subtract the tens first. 50 – 10 = 40

Then we subtract the ones. 6 – 4 = 2

4 tens and 2 ones make 42.

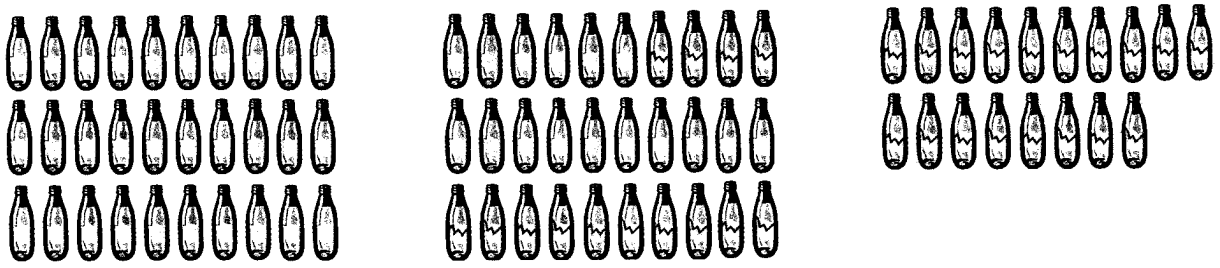
So, 56 – 14 = 42

We can also use a number line to find the answer.



Let's Try

Subtract 32 from 78.



You may use the tens and ones to find the answer.

Method 2

We can also use tens and ones to help us.

45 − 2 =

40 5

4 tens and 5 ones is 45.
Subtract 2 from 5.

There are 4 tens and 3 ones left.
So, 45 − 2 = 43
Subtract 6 from 83.

Subtracting tens

Subtract 30 from 92.

We can count back 3 tens from 92.

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

So, 92 − 30 = 62

5 tens and 3 ones is 53.
4 tens and 5 ones is 45.

Add the tens first. 50 + ☐ = ☐

Now add the ones. ☐ + 5 = ☐

☐ tens and ☐ ones make ☐.

So, 53 + 45 = ☐

Practice 6B

1. Add 5 to the following numbers.

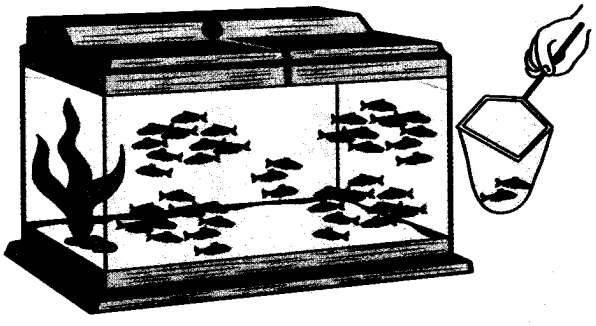
(a) 40 **(b)** 55 **(c)** 79 **(d)** 86

2. Do these.

(a) 47 + 20 **(b)** 32 + 18

Let's Learn

Subtraction within 100



How many fish are left in the tank?

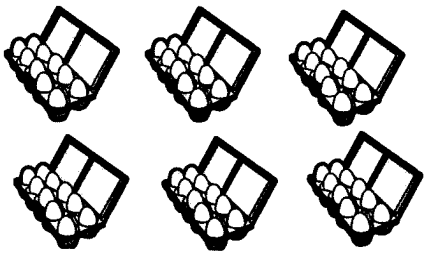
Method 1

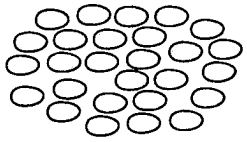
We can count backwards 2 ones from 45.

41	42	43	44	45	46	47	48	49	50

Let's Try

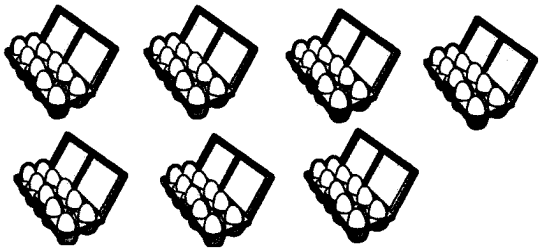
1. There are 87 eggs in all. There are 6 trays of 10 eggs.

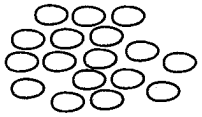




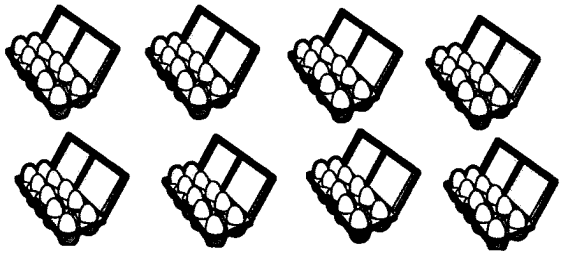
[6] tens [27] ones

Complete the boxes below.



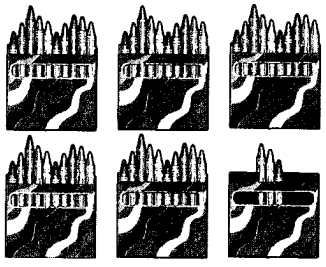


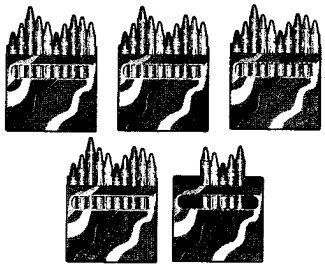
☐ tens ☐ ones



☐ tens ☐ ones

2. Add 53 and 45.





53 + 45 =

50 ☐ ☐ 5

We can count on 3 tens from 42 using the number board.

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

So, $42 + 30 = 72$

Add 52 and 16.

$52 + 16 =$

10 6

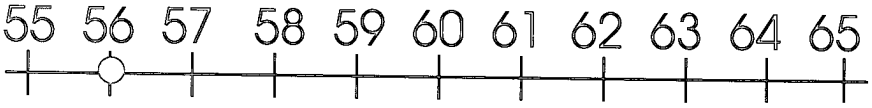
We can add the tens first. $52 + 10 = 62$

Then add 6 ones to the answer.

$62 + 6 = 68$

So, $52 + 16 = 68$

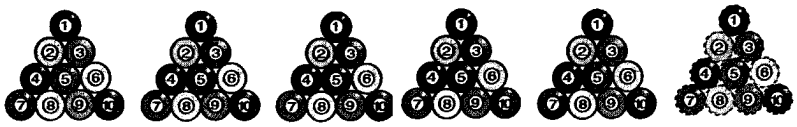
Can you use a number line to find the answer to 56 + 5?



Adding tens

Let's count by sets of tens.

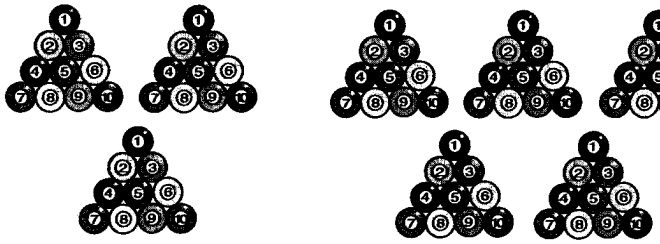
5 tens = fifty



6 tens = sixty

7 tens = seventy

Add thirty to fifty.



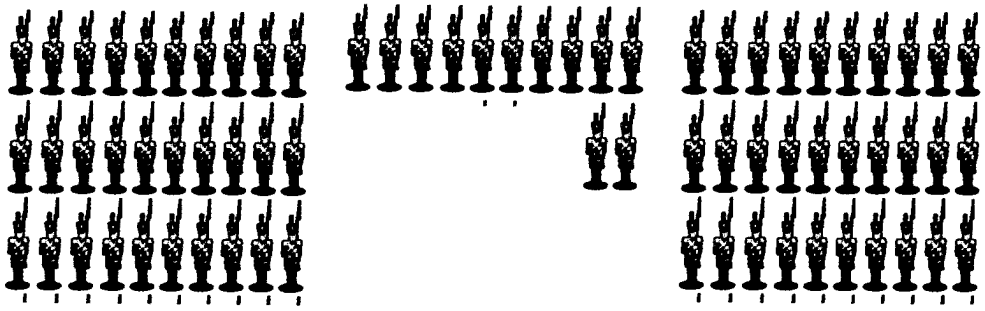
Thirty is 3 tens and fifty is 5 tens.

3 tens + 5 tens = 8 tens

8 tens is eighty.

So, 30 + 50 = 80

Can you add 30 to 42?



Add 68 and 2 to make 7 tens.

So, 68 + 3 = 71

Method 3

We can also use a number line to find the answer.

How many beads are there in all?

Can you count on to get the answer?

We can add the tens and ones.

56 + 5 = 50 + 11 = ☐

50 ☐ ☐ 1

11 ones is ☐ ten and 1 one.

Add ☐ ones and 5 ones to make 11 ones.

5 tens and 11 ones make ☐ tens and 1 one.

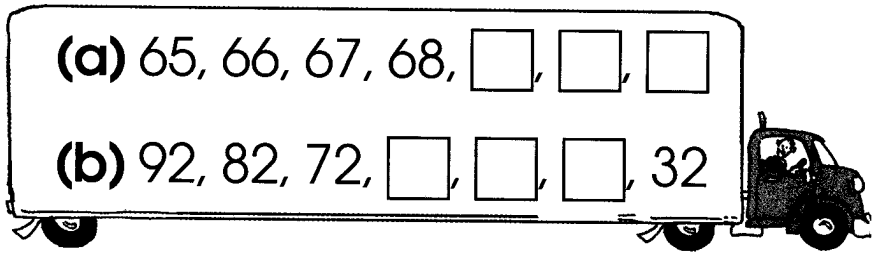
So, 56 + 5 = ☐

2. Write 'Tens' or 'Ones' in the blanks for the number which is underlined.

(a) 5<u>2</u> _____ **(b)** 4<u>9</u> _____

(c) 8<u>0</u> _____ **(d)** <u>3</u>1 _____

3. Complete the number patterns.



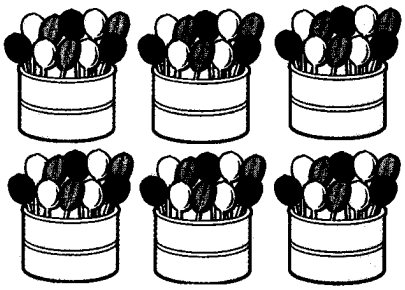
Let's Learn

Addition within 100

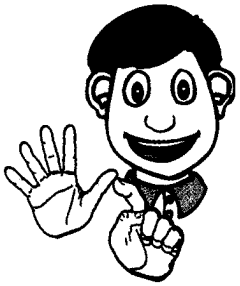
Let's add 68 and 3.

Method 1

We can count on 3 ones from 68.



69, 70, 71



Method 2

We can also add the tens and ones.

$$68 + 3 = 70 + 1$$
$$= 71$$

2 1

If Mr. Worm is at 99 and moves back 4 tens, where will he be?

40 less than 99 is ☐.

If Mr. Ladybird starts at 70, he must move ☐ tens to reach 100.

☐ more than 70 is 100.

Let's Try

1. Fill in the blanks.

(a) Eighty-six is ☐ tens ☐ ones.

(b) Sixty-two is ☐ tens ☐ ones.

(c) One hundred is ☐ tens.

2. Complete the number patterns below.

(a) 24, 34, 44, ☐, ☐, ☐, ☐, 94

(b) 100, ☐, ☐, ☐, ☐, 50, 40, 30

Practice 6A

1. Complete the number patterns below.

(a) ☐, 85, ☐, 65, ☐, 45, 35

(b) sixty-one, fifty-one, _____, thirty-one, _____

Do You Know?

How many sets of 10 stamps are in the picture?

Let's Learn

Order of numbers - journey to 100

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

Mr. Red Ant starts walking from 44 and moves on 3 boxes. Where will he be?

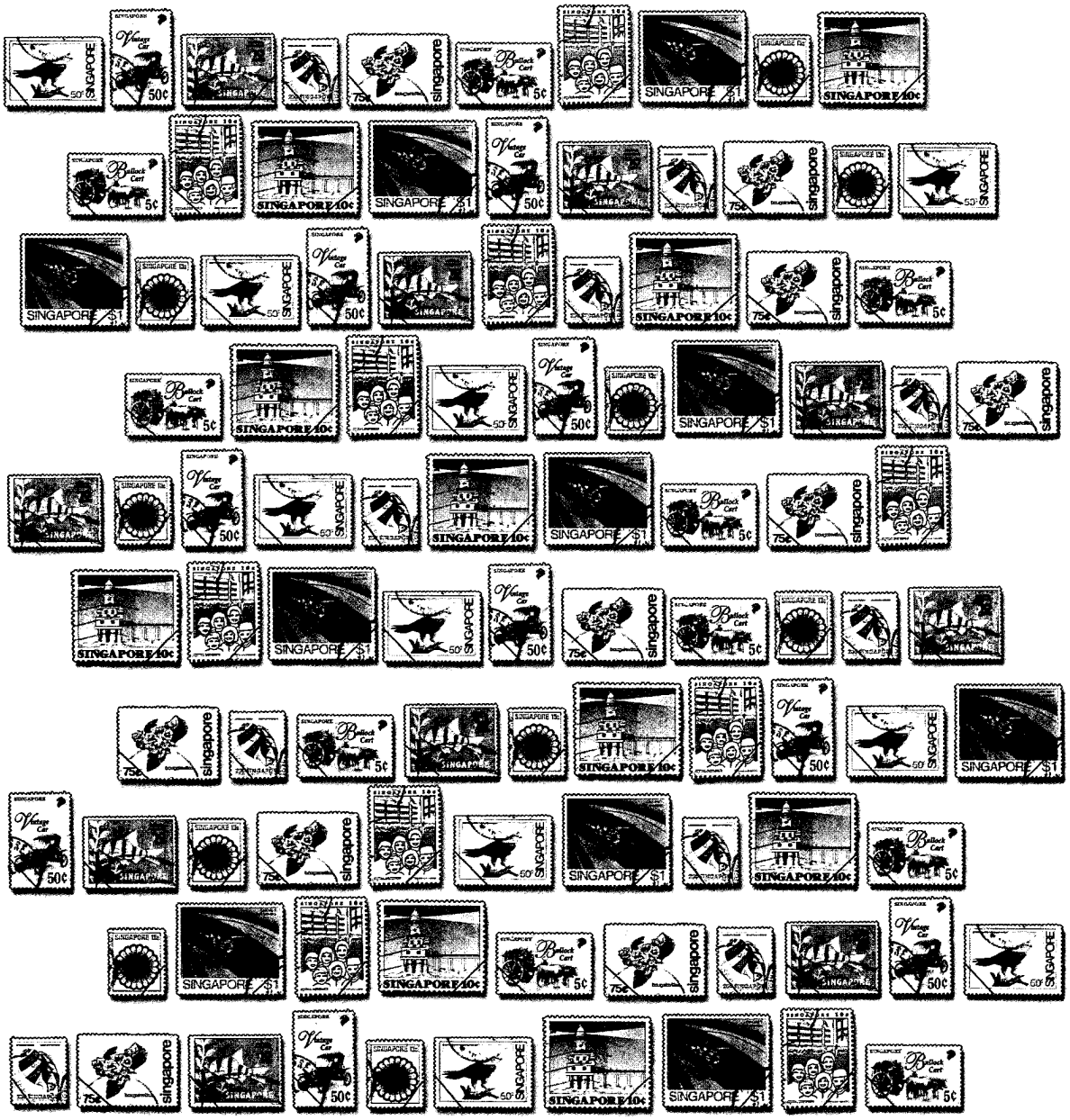
3 more than 44 is ☐.

If Mr. Beetle moves back 2 boxes from 50, where will he be?

2 less than 50 is ☐.

CHAPTER 6

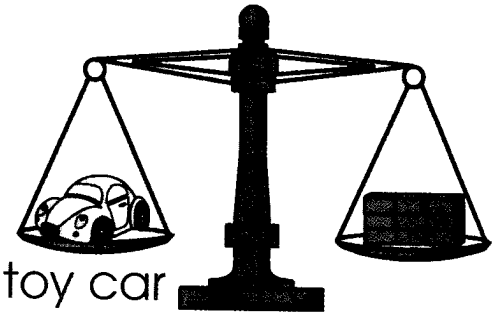
NUMBERS TO 100



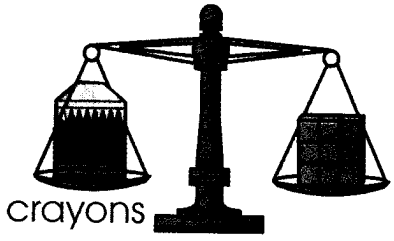
How many stamps are there in each row?
How many rows of stamps are there?
How many stamps are there altogether?

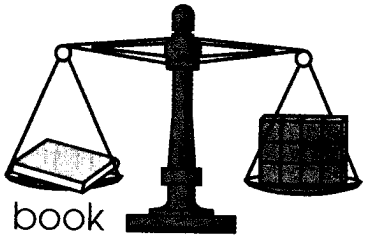
Practice 5B

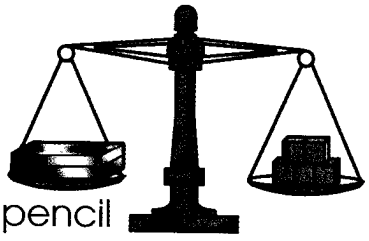
1. Take ▬ as 1 unit.
The mass of the toy car is ☐ units.



2. Let ▪ be 1 unit. Fill in the blanks.







(a) The mass of the pencil box is ☐ units.

(b) The mass of the book is ☐ units.

(c) The ☐ is the lightest.

(d) The box of crayons is heavier than the ☐ but lighter than the ☐.

Fun With Maths

Go to the market with your mother. Can you tell which is the heaviest item she buys? Which item is the lightest?

Take ● as 1 unit.

The ball has the smallest mass.
The toy truck has the greatest mass.

Toy	Mass
bear	____ units
ball	____ units
toy truck	____ units

We say: The ball is the **lightest**.
The toy truck is the **heaviest**.

The bear is lighter than the toy truck, but heavier than the ball.

What is the mass of each item? Guess the mass for each item first. Use  as 1 unit.

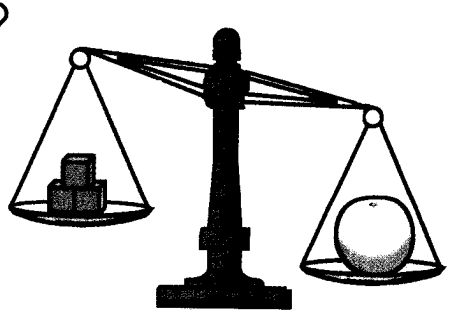
Item	I guess the mass is	The actual mass is
4 pens	about ____ 	about ____ 
scissors		
ruler		
note-book		

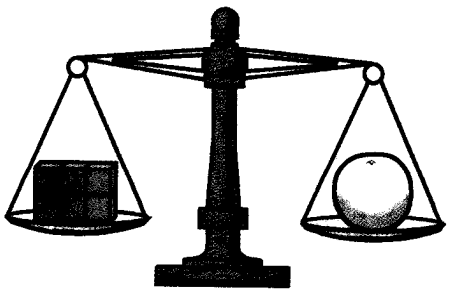
Which is the heaviest object?
Which object has the smallest mass?
Which items are lighter than the notebook?
Which items have a greater mass than the ruler?

Let's Learn

Measuring mass

Place an orange on one side of the pan balance. How many blocks do we need to balance the orange?





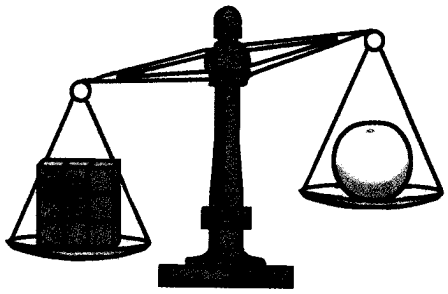
We need 6 blocks to balance the mass of the orange.

We say:

The mass of the orange is 6 blocks.

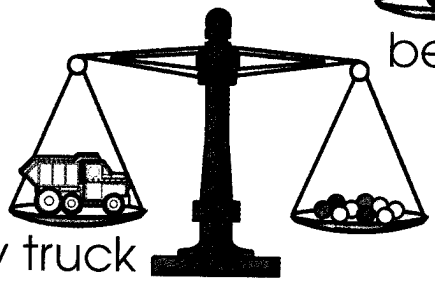
or:

The orange is as heavy as 6 blocks.

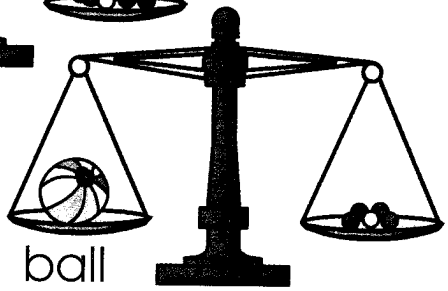


What is the mass of each toy?

bear



toy truck

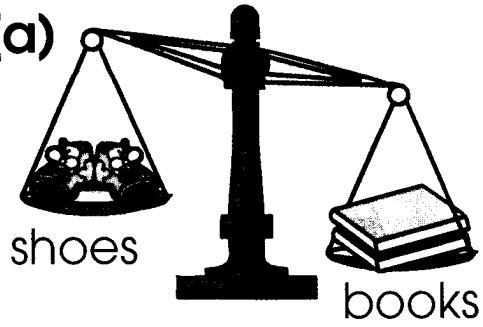


ball

Practice 5A

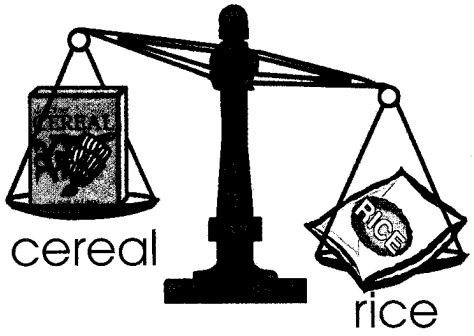
1. Write 'heavier than', 'lighter than' or 'as heavy as' in the blanks.

(a)



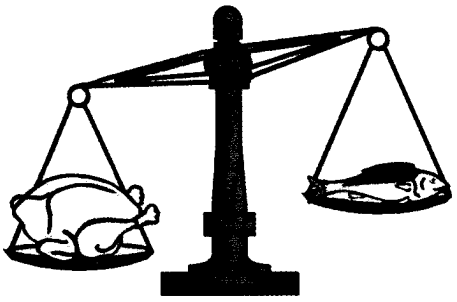
The pair of shoes is ☐ the two books.

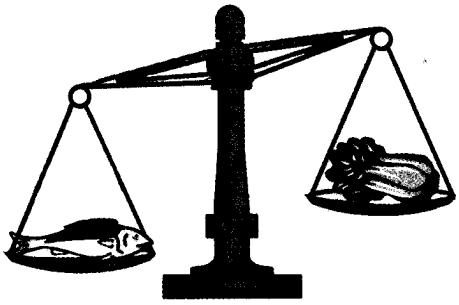
(b)



The packet of rice is ☐ the box of cereal.

2. Write 'more than', 'less than', 'greatest', or 'smallest' in the blanks.





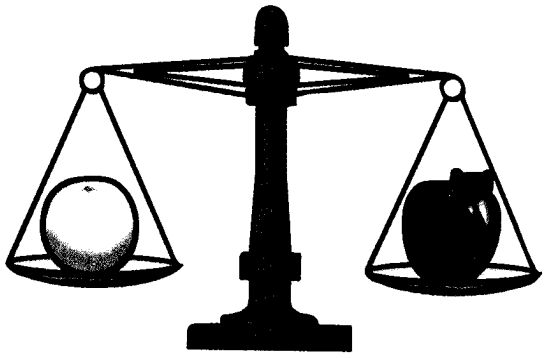
(a) The mass of the vegetable is ☐ the mass of the fish.

(b) The mass of the chicken is ☐ the mass of the vegetable.

(c) The chicken has the ☐ mass.

(d) The vegetable has the ☐ mass.

Compare the mass of this apple and this orange.



We say:

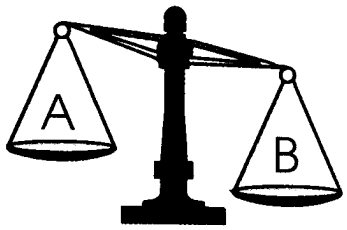
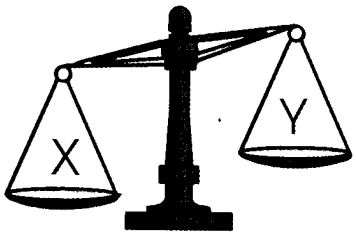
The mass of the apple is the same as the mass of the orange.

or:

The apple is as heavy as the orange.

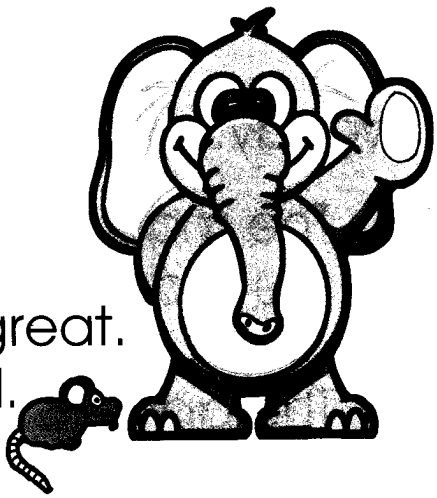
In-Class Activity

Write down three pairs of objects found in your classroom that balance in the following ways:

			
A is lighter than B		X is heavier than Y	
A	B	X	Y
a pencil	a pair of scissors	a piece of chalk	a piece of paper

Mass of objects

The mass of an object tells us how heavy or light it is.



We say:

An elephant is heavy.
A mouse is light.

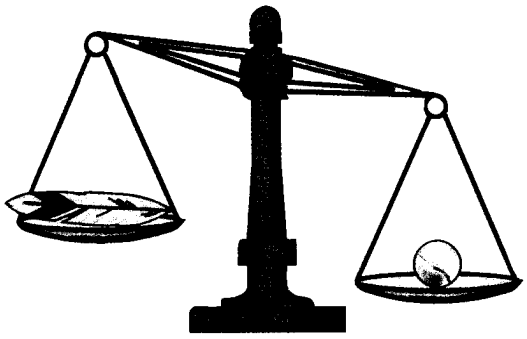
or:

The mass of an elephant is great.
The mass of a mouse is small.

Comparing mass

We can use a balance to compare the mass of two different objects.

Compare the mass of a feather and a marble.

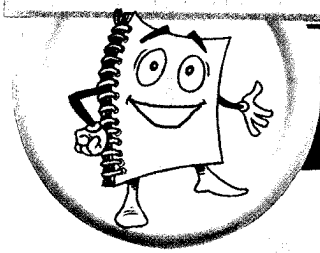


We say:

The marble has a greater mass than the feather.
The feather has a smaller mass than the marble.

or:

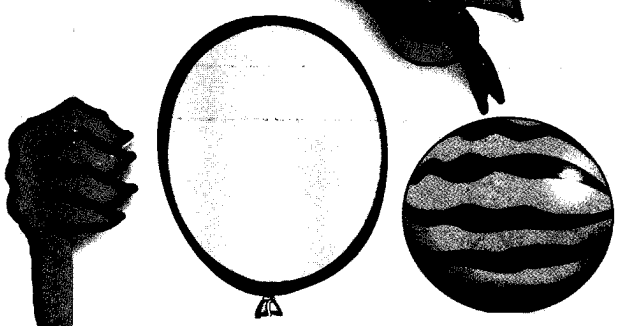
The marble is **heavier than** the feather.
The feather is **lighter than** the marble.



MASS

Which is lighter?

Which is heavier?

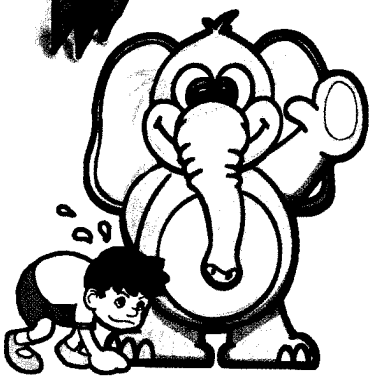


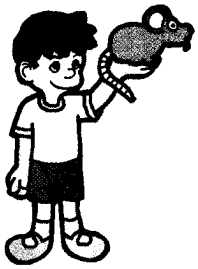
Do You Know?

How heavy is an elephant?
How light is a mouse?

We know that an elephant is very heavy and a mouse is light.

A mouse is lighter than an elephant.



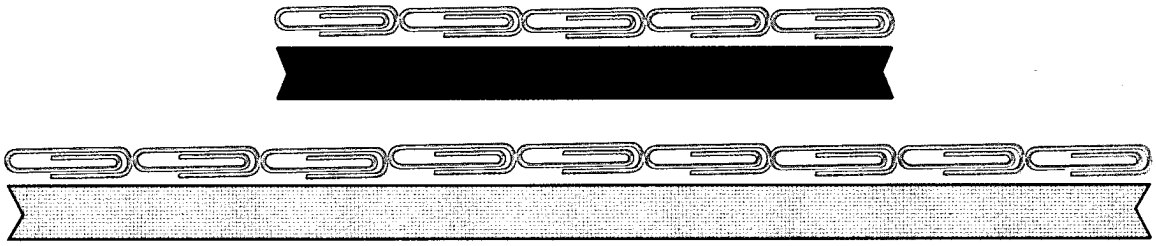


10. Fill in the blanks.

(a) The red ribbon is ☐ paperclips long.

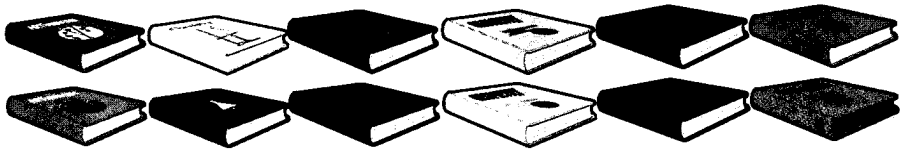
(b) The yellow ribbon is ☐ paperclips long.

(c) The yellow ribbon is ☐ paperclips _____ than the red ribbon.



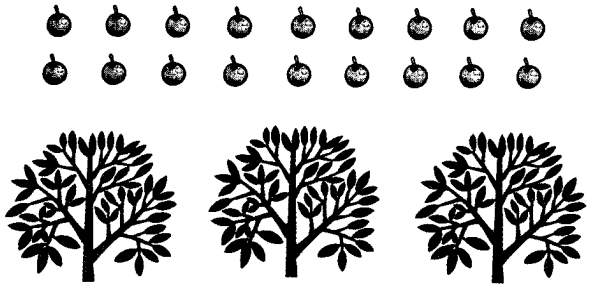
11. Minghua has 12 books.

(a) How many stacks of 2 books can Minghua make?



(b) If Minghua wants to give all his books equally to 4 friends, how many books will each of his friends get?

7. Draw an equal number of berries on each bush. Then fill in the blanks.

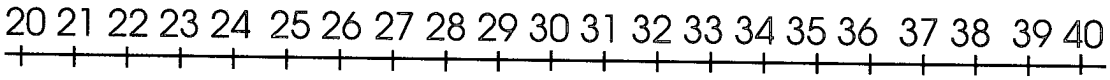


There are ☐ berries altogether.

There are ☐ berries on each bush.

Exercise 3

8. Complete the following. Use the number line to help you.



(a) 2 more than 23 is ☐.

(b) 1 less than 40 is ☐.

(c) 3 less than 37 is ☐.

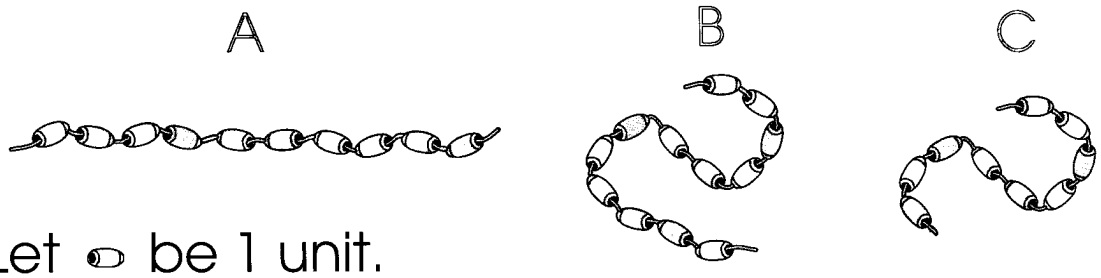
(d) 10 more than 20 is ☐.

9. Mrs. Lee gives Jenny, Susan, Kate and Mary 7 worksheets each. How many worksheets does Mrs. Lee give the 4 girls altogether?

☐ ○ ☐ = ☐

Mrs. Lee gives the girls ☐ worksheets altogether.

5. Fill in the blanks.



Let ⬭ be 1 unit.

String A is about ☐ units long.

String C is about ☐ units long.

String ☐ is the longest.

String ☐ is 1 unit longer than string C.

6. Use the number board to help you find the answers to the sums below.

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

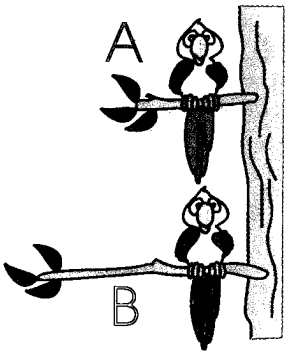
(a) 40 − 20 = ☐ **(b)** 12 + 12 = ☐

(c) 25 − 5 = ☐ **(d)** 17 + 8 = ☐

3. Ring **A** or **B**.

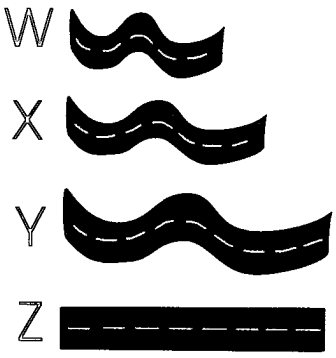
(a) Bird A is on the _____ branch of the tree.

A. longer **B.** higher



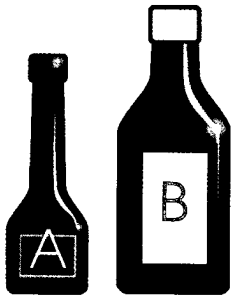
(b) Road Y is the _____ road.

A. longest **B.** shortest



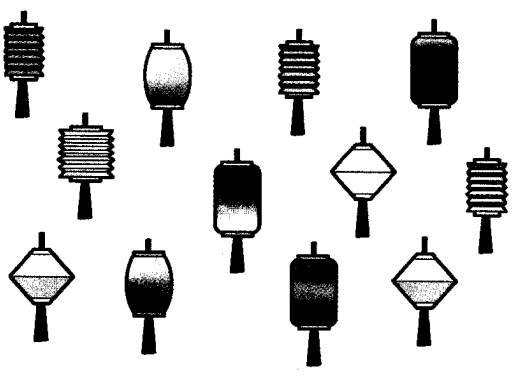
(c) Bottle B has a _____ neck.

A. longer **B.** shorter

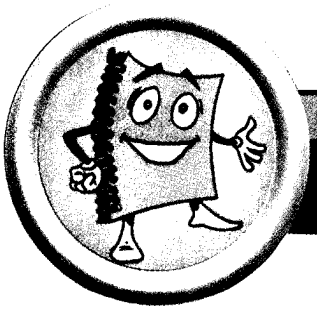


4. Ring groups of 4 and fill in the blanks.

☐ groups of 4



☐ groups of 4.



REVISION 1

Exercise 1

1. Fill in the boxes.

Forty is ☐ tens ☐ ones.

Twenty is ☐ tens ☐ ones.

Thirty-nine is ☐ tens and ☐ ones.

Twenty-six is ☐ tens and ☐ ones.

☐ is 3 tens.

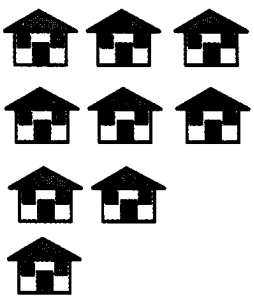
☐ is 1 ten.

☐ is 3 tens and 4 ones.

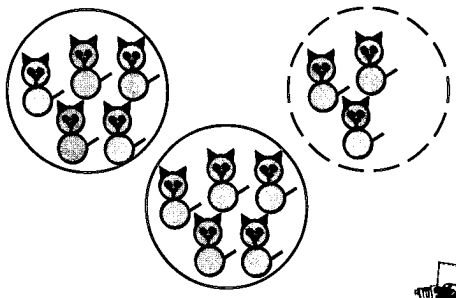
☐ is 2 tens and 8 ones.

2. Complete these pictures to show:

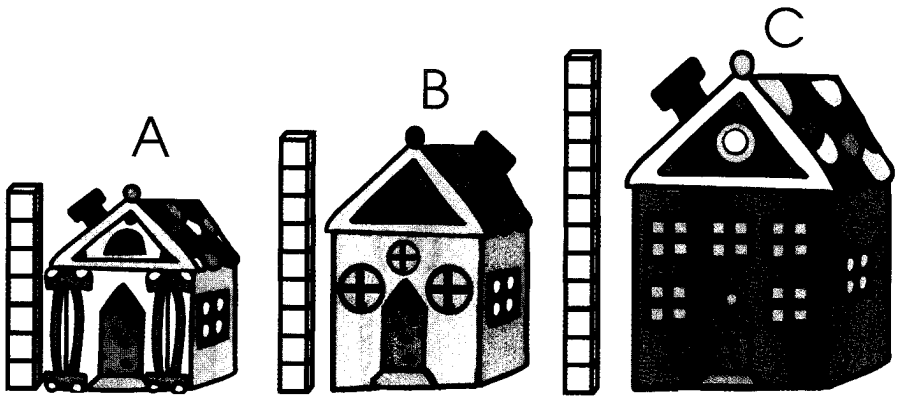
(a) 4 rows of 3 houses



(b) 3 groups of 5 cats



(b)



House C is ☐ blocks tall.

House ☐ is taller than house B.

House A is the ☐.

Fun With Maths

Measure the distances between places in your classroom.

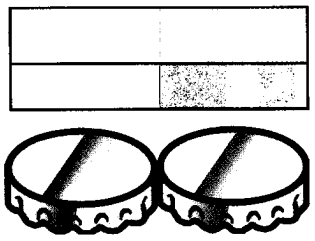
Count the number of footsteps you take to reach the blackboard and the teacher's table from your table.

How far are these places from your table? Record the distances in the table below.

	Distance in footsteps
blackboard	
teacher's table	

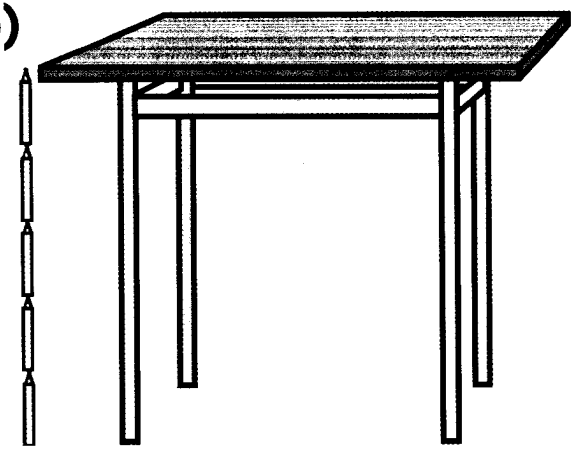
1. Fill in the blanks.

(a)



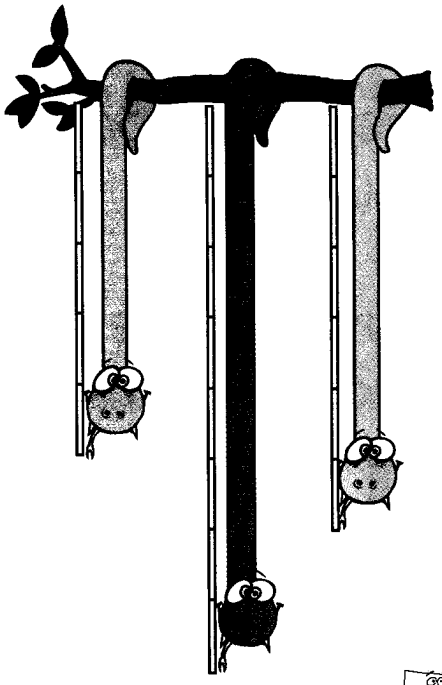
The eraser is ☐ bottlecaps long.

(b)



The table is ☐ pens tall.

1. Fill in the blanks.

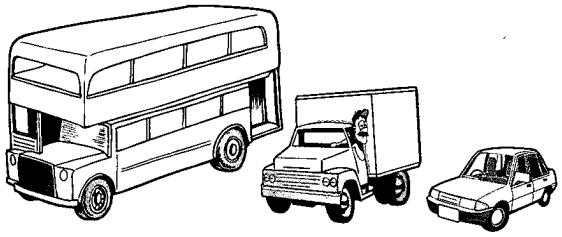


(a) The green snake is about ☐ sticks long.

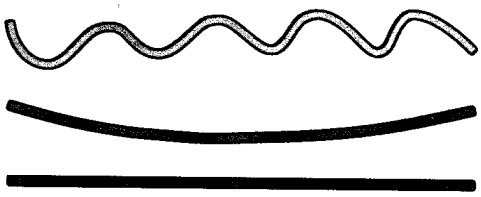
The ☐ snake is the shortest.

The black snake is ☐ than the green snake.

1. Color the tallest vehicle.



2. Ring the shortest string.

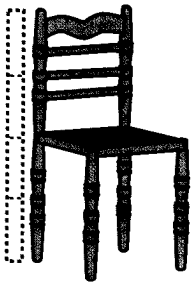


Measuring length

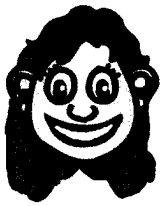
How long is your Mathematics textbook? Measure it with paperclips.

My book is about ☐ paperclips long.

How high is your chair?



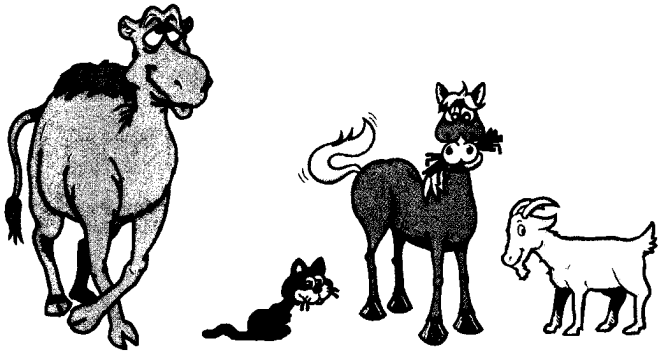
Measure the height using a long ruler. Then measure it using a pencil.



Compare your answers with your friends.

Are the answers the same? If not, can you tell why?

What can we use to get the same answers?



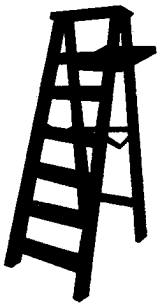
The camel is the tallest.
The cat is the shortest.
The horse is ☐ than the goat but ☐ than the camel.

Let's Try

1. Look at these ladders.

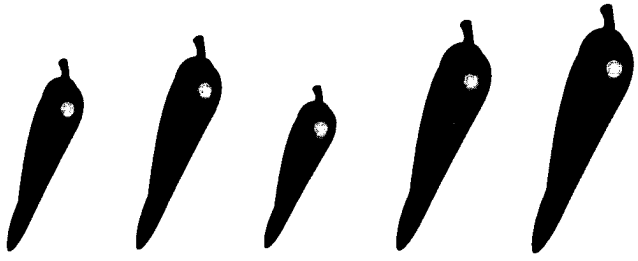
A 

B 

C 

Which ladder is taller than B?
Which ladder is the shortest?

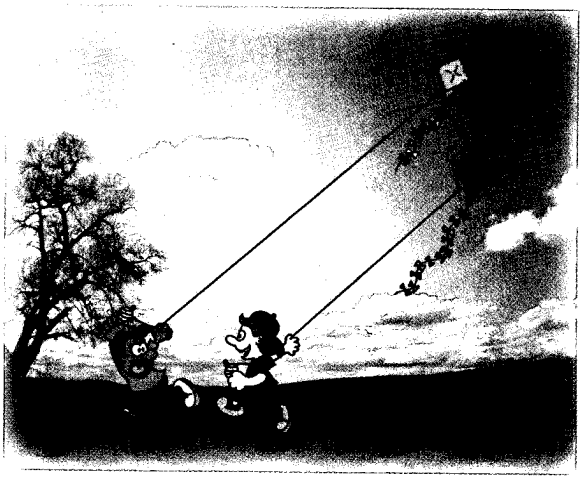
2. These items are to be arranged in order of length. Ring the item that is not in the right order and then put it in the right order.



longest

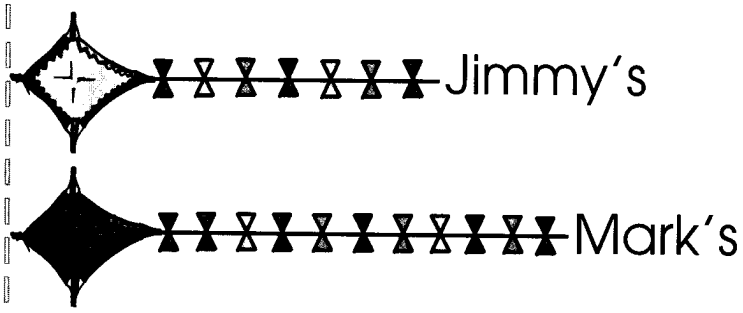
Let's Learn

Longer, shorter, higher



Mark and Jimmy are flying kites at the park.

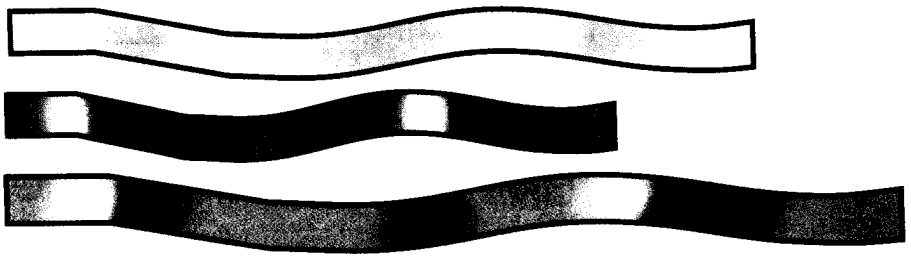
Jimmy's kite is flying higher than Mark's kite.



Mark's kite has a longer tail than Jimmy's kite.
Jimmy's kite has a shorter tail than Mark's kite.

Longest, shortest, tallest

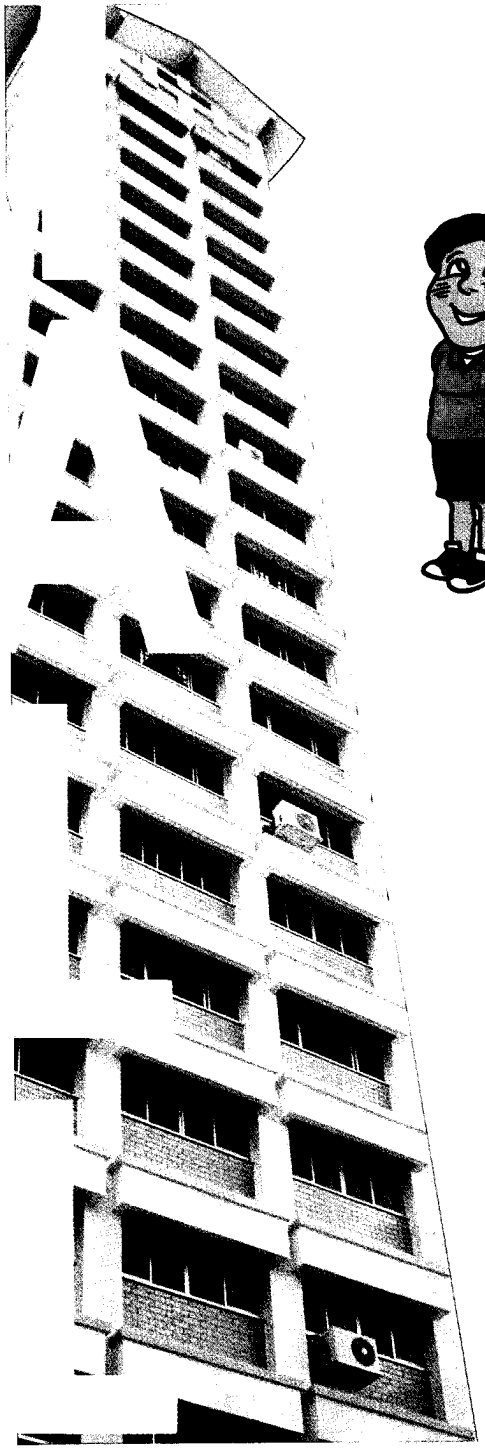
What can we say about these ribbons?

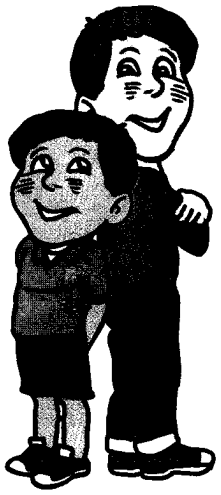


The blue ribbon is the longest ribbon.
The red ribbon is the shortest ribbon.

The red ribbon is ☐ than the blue ribbon.

The blue ribbon is ☐ than the yellow ribbon.





John is taller than Al.

Al is shorter than John.

Get into groups of 3 with your classmates.

Stand back to back with one classmate.

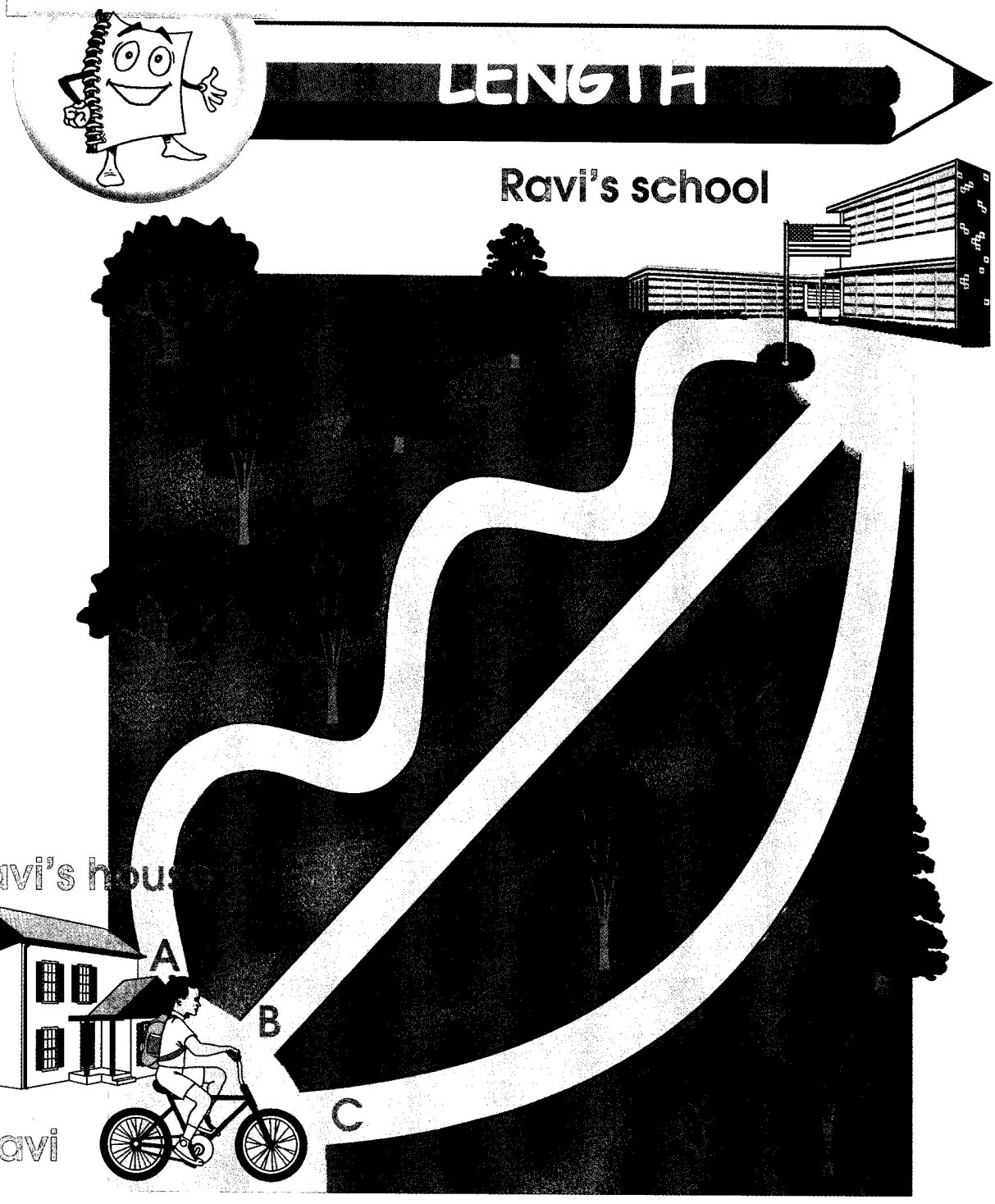
Ask the other classmate to see who is taller.

Then write down:

I am taller than _____.
I am shorter than _____.

Take turns with your friends.

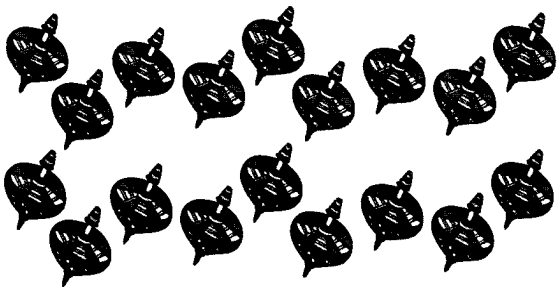
LONG



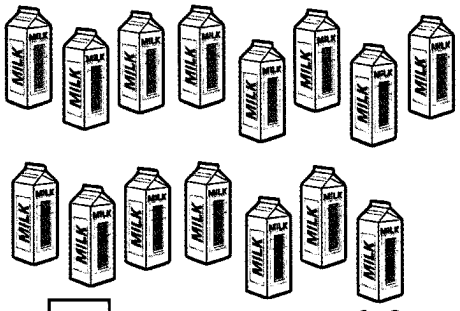
Ravi does not want to be late for school.
Which path will he choose? Why?

Practice 3B

1. Ring groups of 3. Then fill in the blanks.

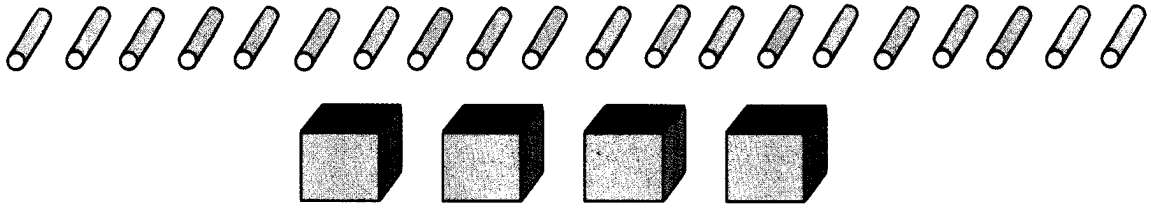


☐ groups of 3



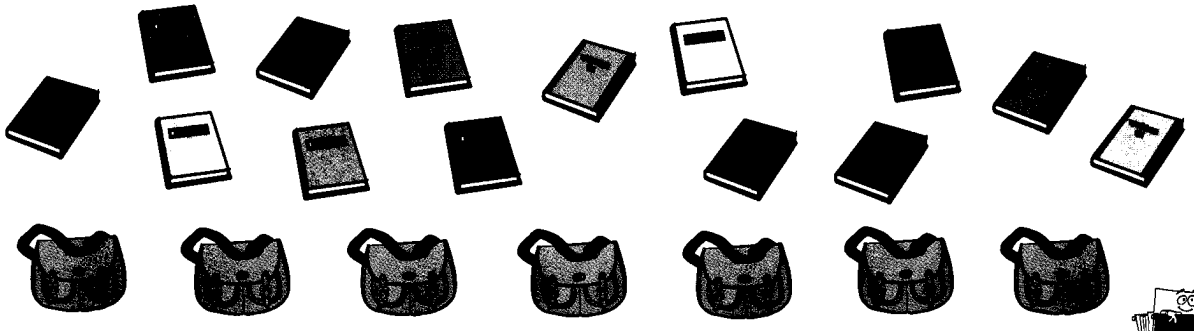
☐ groups of 3

2. Divide 20 pieces of chalk equally into 4 boxes.



Each box will have ☐ pieces of chalk.

3. Joyce puts 14 books equally into 7 bags.
How many books are there in each bag?
(Use counters to help you.)



In Class Activity

Look at the rows of tables in your classroom. How many tables are there in 2 equal rows?

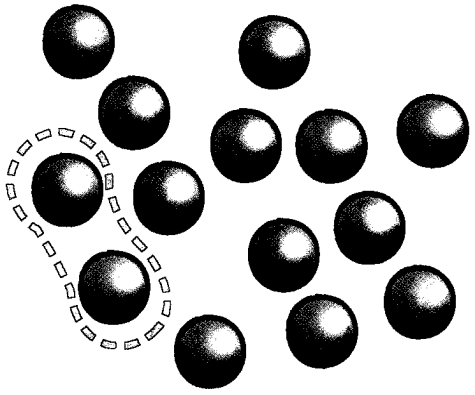
Can you rearrange these tables in:
(a) 3 equal rows? **(b)** 4 equal rows?

Say how many tables there are in each equal row.

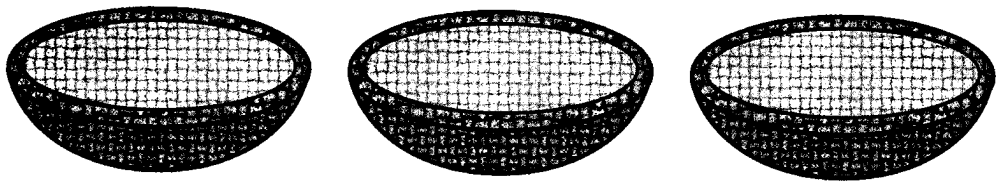
Application

1. There are ☐ balls altogether.

There are ☐ groups of two.

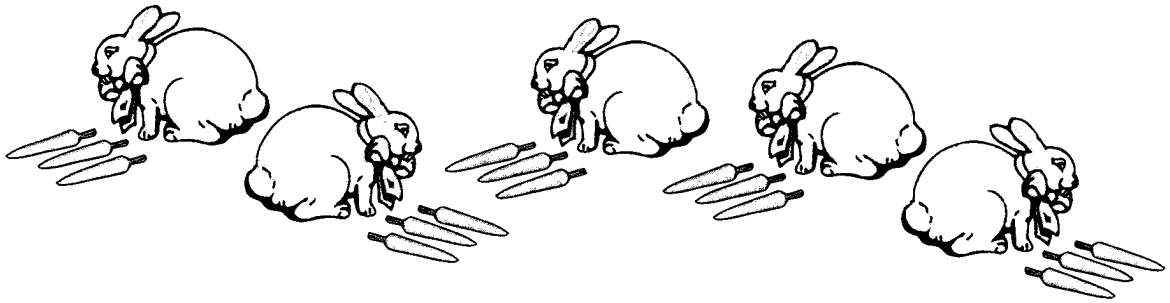


2. Divide 15 apples equally into 3 baskets.



Each basket will have ☐ apples.

More on sharing



Ravi has 15 carrots and 5 pet rabbits.

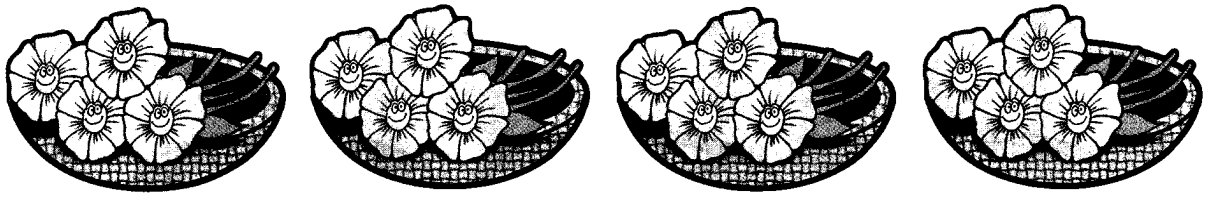
He shares the carrots equally among the rabbits.

How many carrots does each rabbit get?

More on grouping

Mei Ling puts 16 flowers into baskets.
She wants to put 4 flowers in each basket.

Each basket has a group of 4 flowers.



How many groups of 4 are there?
How many baskets does Mei Ling need?

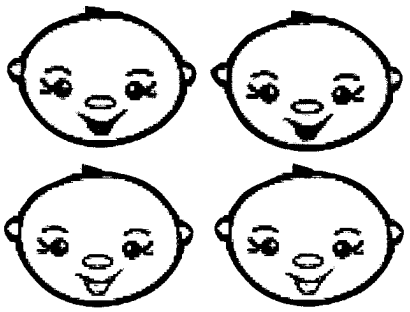
2. Color the pictures and fill in the blanks with the correct answer.

(a)

$3 \times 4 = \square$

Divide $\square$ into 3 rows.
There are $\square$ in each row.

(b)

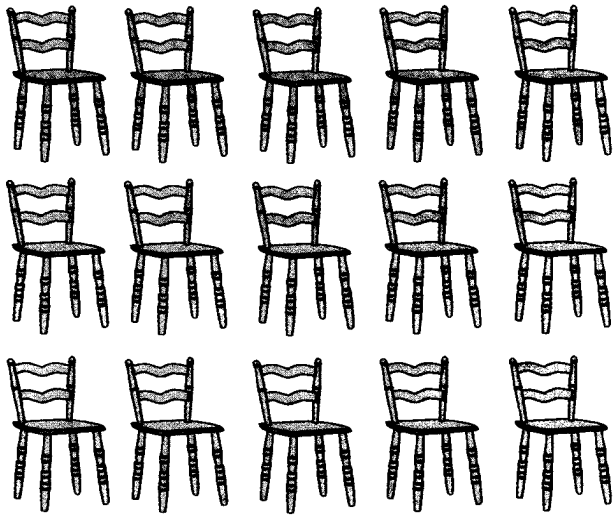


$2 \times 2 = \square$

Divide $\square$ into 2 rows.
There are $\square$ in each row.

3. Arrange these chairs in rows of 3.

How many rows are there?



2. Draw 3 fish for each cat. Then fill in the boxes with the correct answer.

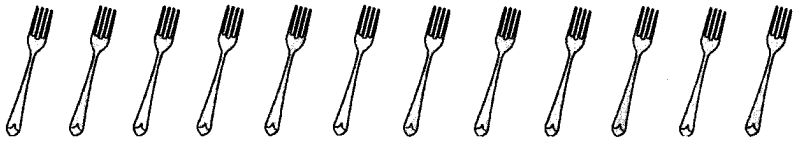
(a) 3 cats have 3 fish each.

There are ☐ fish altogether.

(b) 3 cats share 9 fish.

There are ☐ fish for each cat.

3. Ring groups of 3 forks. Then fill in the blanks with the correct answer.



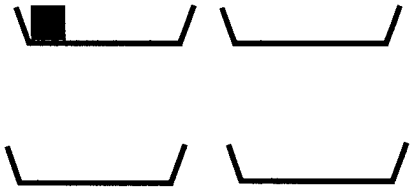
There are ☐ forks altogether.

There are ☐ groups of 3 forks.

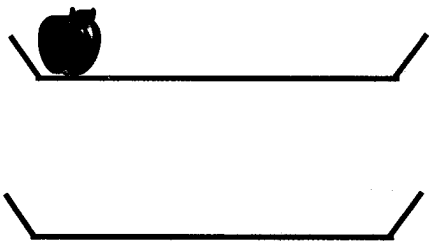
Practice 3A

1. Use counters to help you divide the objects into equal groups. Then draw the objects in the trays.

Show 16 blocks.

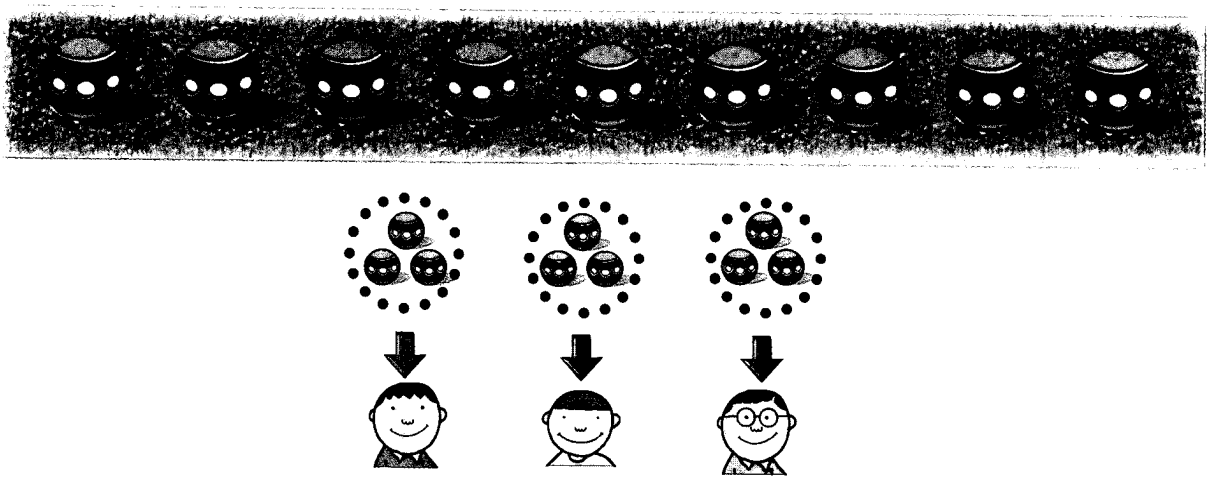


Show 14 apples.



Division is also about sharing.

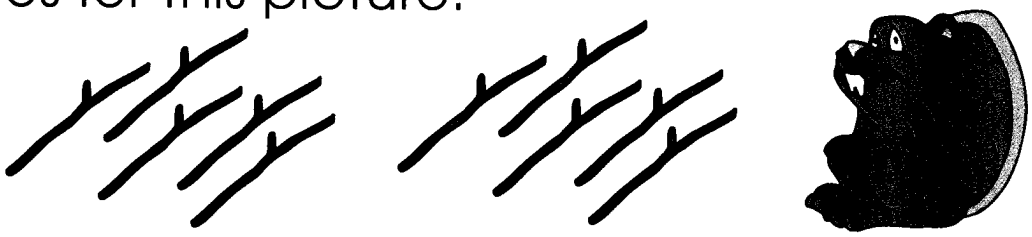
Share these balls equally among 3 boys.



Each boy gets 3 balls.

Let's Try

1. Complete the multiplication and division stories for this picture.



There are 2 groups of 5 sticks each.

$2 \times 5 = \square$

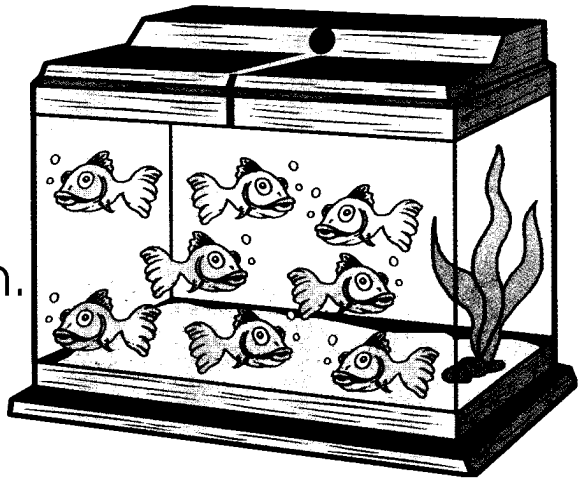
There are $\square$ sticks altogether.

10 sticks are grouped into 2 groups.

Each group has $\square$ sticks.

Grouping

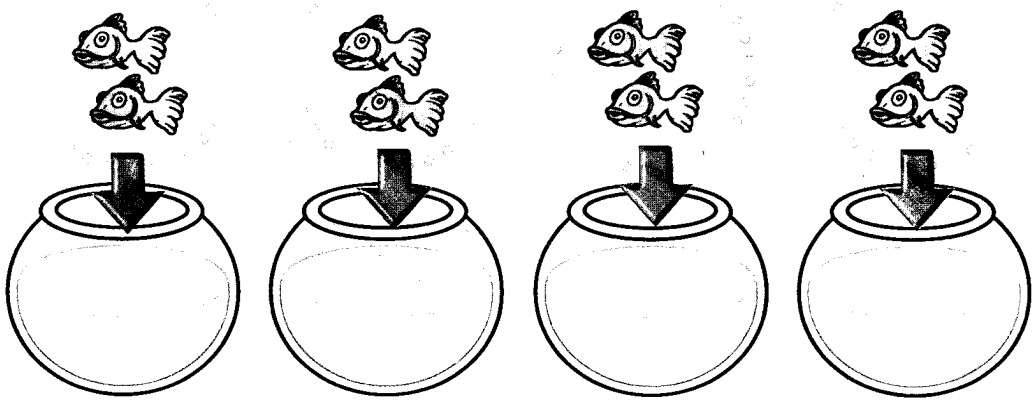
Sam wants to put these goldfish into fish bowls.



One bowl can hold 2 fish.
How many bowls will Sam need?

There are 8 goldfish altogether.
Put the same number of fish into each bowl.

There are 2 in each group.
How many groups of 2 are there?



There are 4 groups of 2. Sam needs 4 fish bowls.

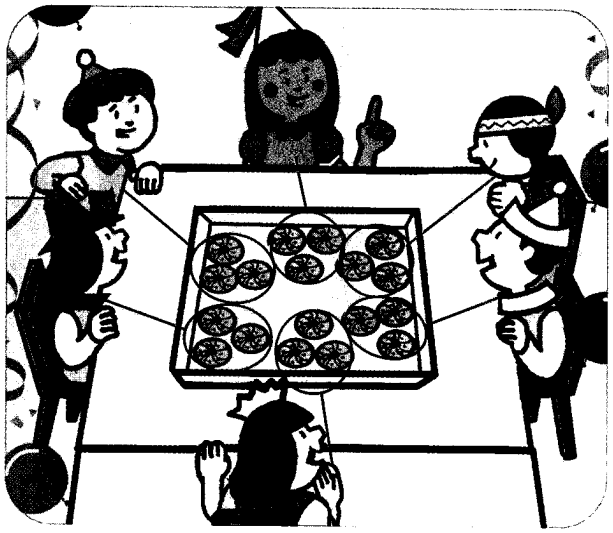
Division is making equal groups.

Let's Learn

Equal sharing

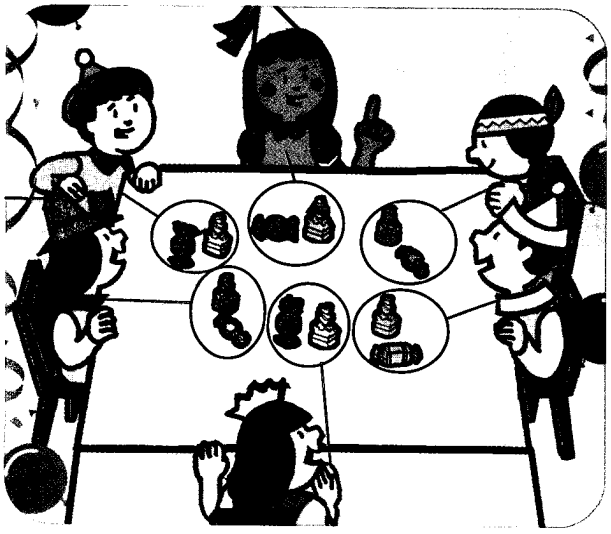
18 cookies are shared equally among 6 children.
How many cookies will each child get?

Divide 18 into 6 groups.
There are 3 in each group.



Each child will get
3 cookies.

12 sweets are shared equally among 6 children.
How many sweets will each child get?



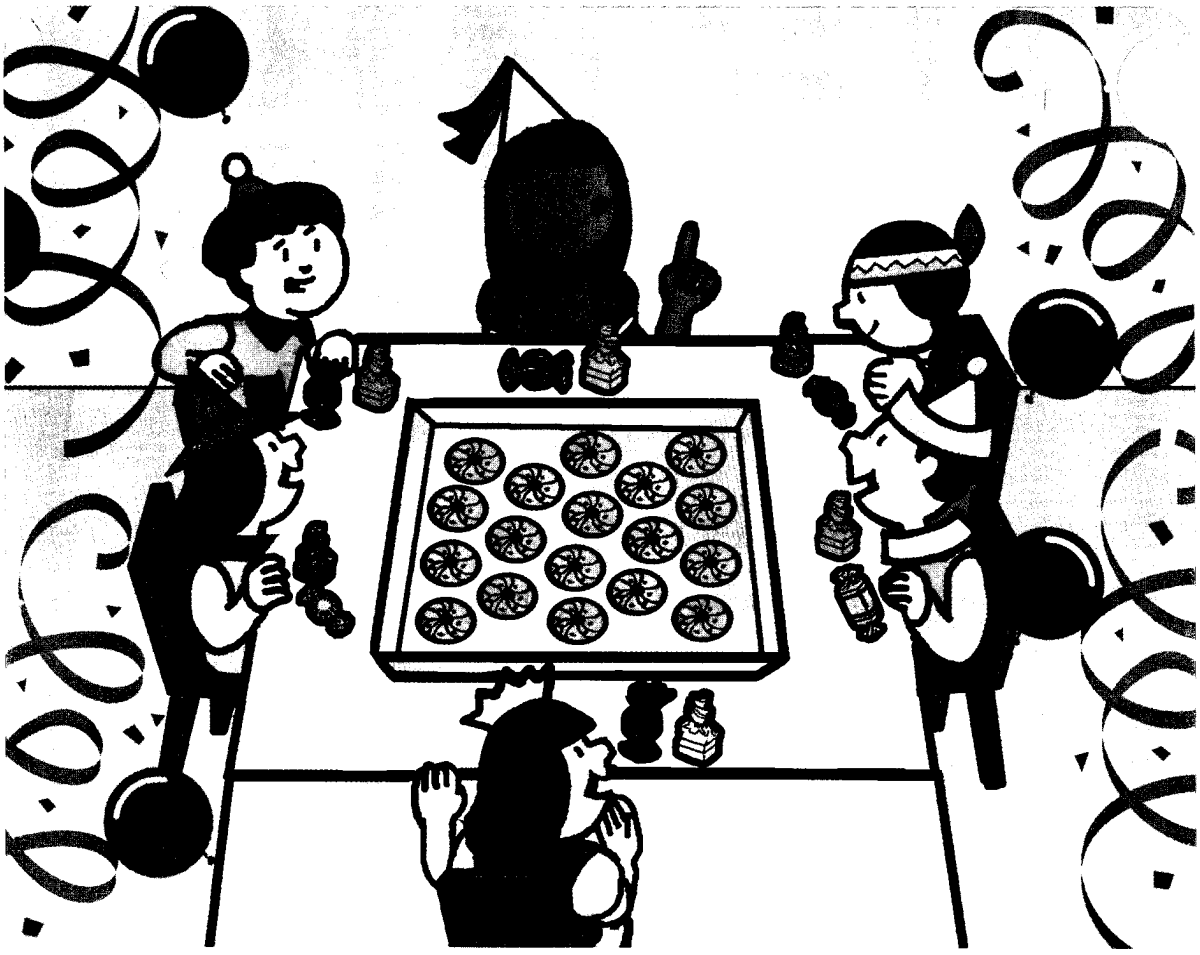
Divide 12 into 6 groups.
There are 2 in each group.

Each child will get
2 sweets.

CHAPTER 3

DIVISION

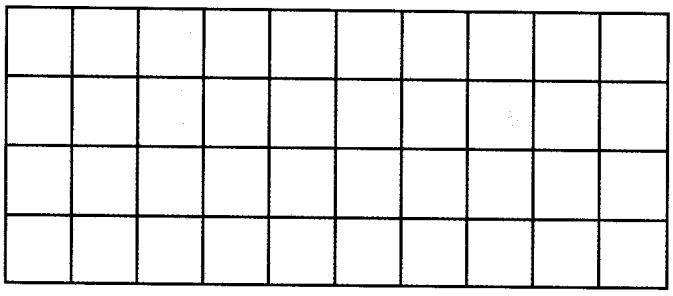
At Jane's Party



How many children are at the party?
How do you share the cookies equally among the children?
How many cookies will each child get?

1. Color the correct number of squares. Then fill in the blank with the correct answer.

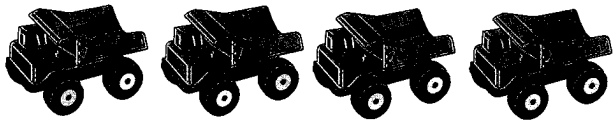
3 rows of 8



$3 \times 8 = \square$

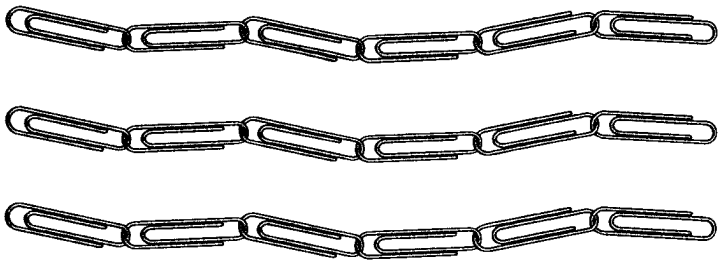
2. Write the correct answer.

(a)



$1 \times 4 = \square$

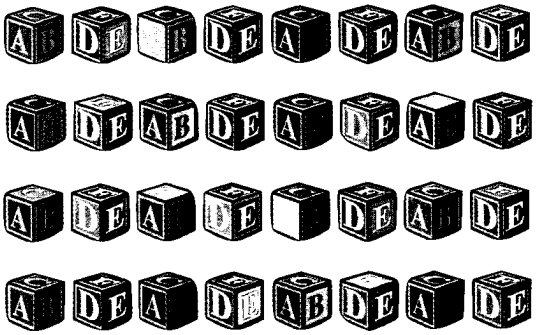
(b)



$3 \times 6 = \square$

Let's Try

1. How many blocks are there altogether?



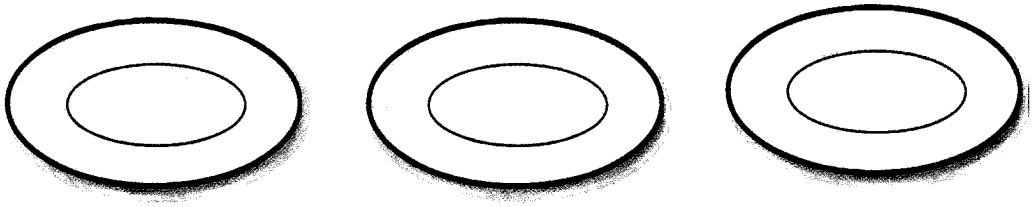
There are ☐ rows of blocks.

There are ☐ blocks in each row.

$4 \times 8 = \square$

There are ☐ blocks altogether.

2. Draw apples on the plates to show 3 groups of 7. How many apples are there altogether?



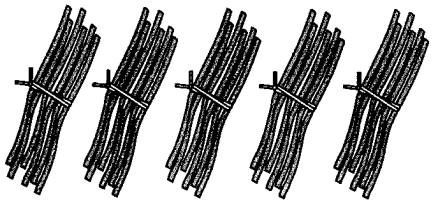
There are ☐ plates of apples.
There are 7 apples on each plate.

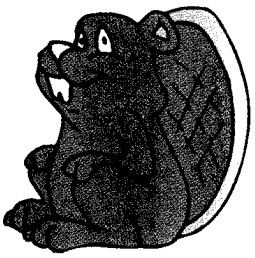
$\square \times 7 = \square$

There are ☐ apples altogether.

Let's Learn

More multiplication





There are 5 groups of sticks.

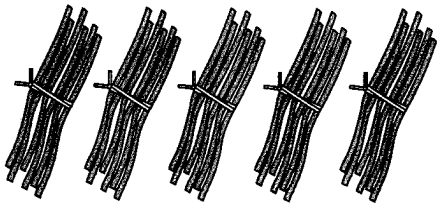
There are 6 sticks in each group.

$$6 + 6 + 6 + 6 + 6 = 30$$

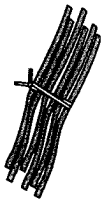
$$5 \times 6 = 30$$

5 groups of 6 equal 30.

Add another group of 6 sticks.



$5 \times 6 = 30$



6

How many sticks are there altogether now?

There are ☐ groups of sticks.

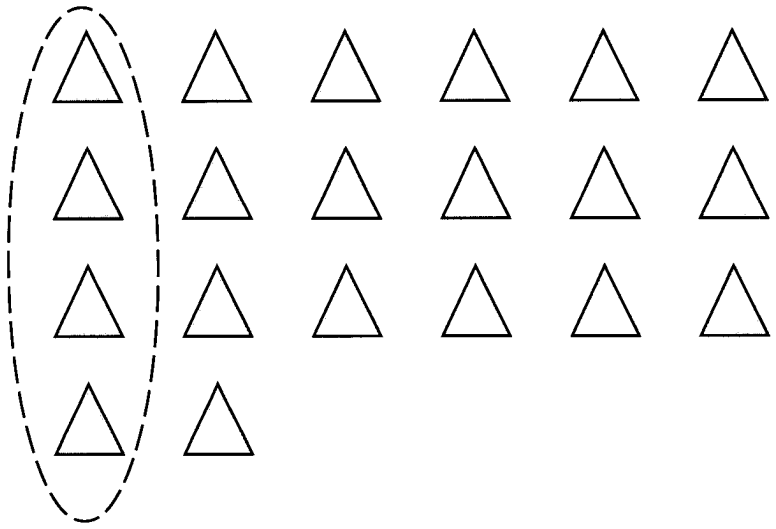
There are 6 sticks in each group.

There are 6 groups of 6.

$$\square \times 6 = \square$$

There are ☐ sticks altogether.

2. Ring groups of 4 △ and fill in the blanks.



There are _____ groups of △ .

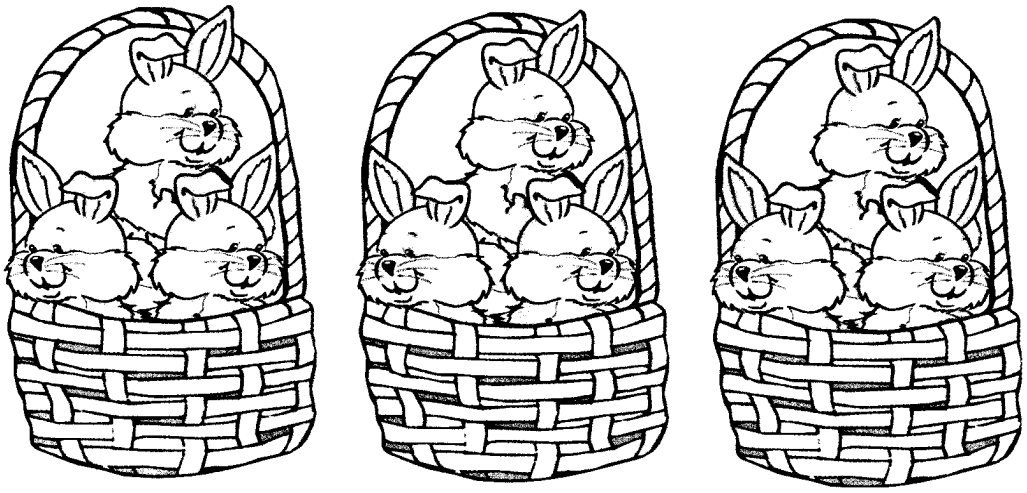
There are _____ △ altogether.

3. Match the following.

3 times 4	6 × 2
4 groups of 6	3 × 4
2 + 2 + 2 + 2 + 2 + 2	3 × 5
3 groups of 5	4 × 6

Practice 2A

1. Fill in the blanks with the correct answers.



(a) There are ☐ groups of rabbits.

There are ☐ rabbits in each group.

There are ☐ threes.

(b) Write an addition sentence for the picture.

☐ + ☐ + ☐ = ☐

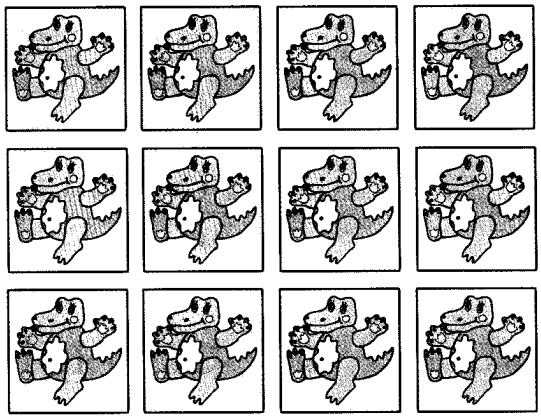
(c) Write a multiplication sentence for the picture.

☐ × ☐ = ☐

(b) Write a multiplication sentence to show the number of toothpicks.

$2 \times \square = \square$

2. Fill in the boxes with the correct numbers.



$4 + 4 + 4 = \square$

$3 \times 4 = \square$

$6 + 6 = \square$

$2 \times 6 = \square$

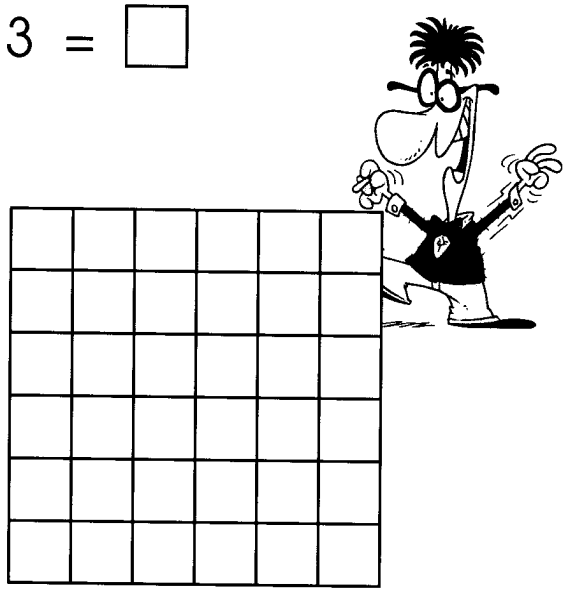
2. Make 3 rows of 5 counters.
How many counters are there altogether?

$3 \times 5 = \square$

Make 5 rows of 3 counters.
How many counters are there altogether?

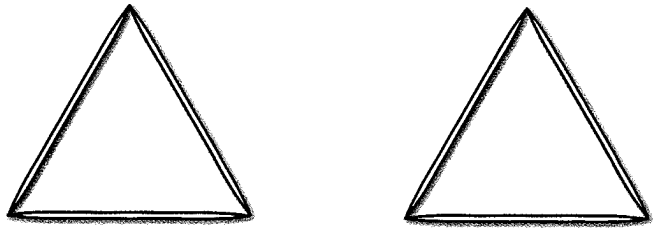
$5 \times 3 = \square$

3. Make 3 more multiplication stories with the counters and the grid.



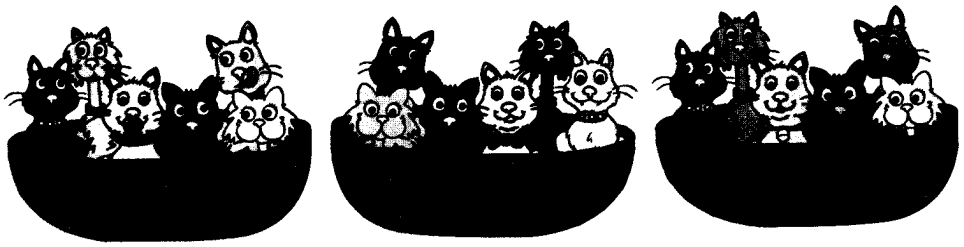
Let's Try

1. How many toothpicks are there altogether?



(a) Write an addition sentence to show the number of toothpicks.

$\square + \square = 6$



How many kittens are there altogether?

There are 3 baskets.
There are 6 kittens in each basket.

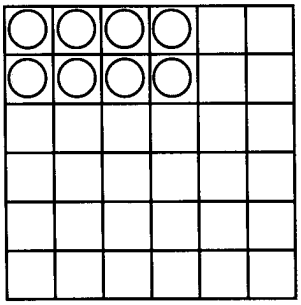
$3 \times 6 = \square$

3 groups of 6 equal $\square$.

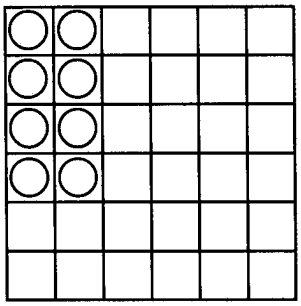
There are $\square$ kittens altogether.

In Class Activity

Use the grid paper and counters provided by your teacher.

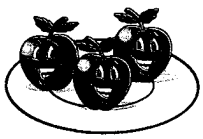


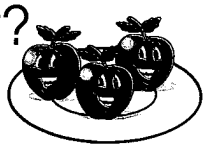
1. Make 2 rows of 4 counters.
How many counters are there altogether? $2 \times 4 = \square$



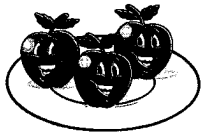
Make 4 rows of 2 counters.
How many counters are there altogether? $4 \times 2 = \square$

There are 5 plates.
There are 3 apples on each plate.
How many apples are there altogether?

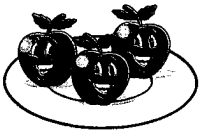




There are 5 groups of 3.

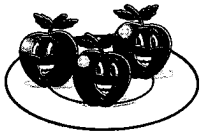


$$3 + 3 + 3 + 3 + 3 = 15$$

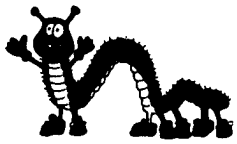


5 groups of 3 equal 15.

$$5 \times 3 = 15$$



There are 15 apples altogether.



Multiplication stories

There are 4 books on each shelf.

There are 5 shelves altogether.

$4 + 4 + 4 + 4 + 4 = 20$

$5 \times 4 = 20$

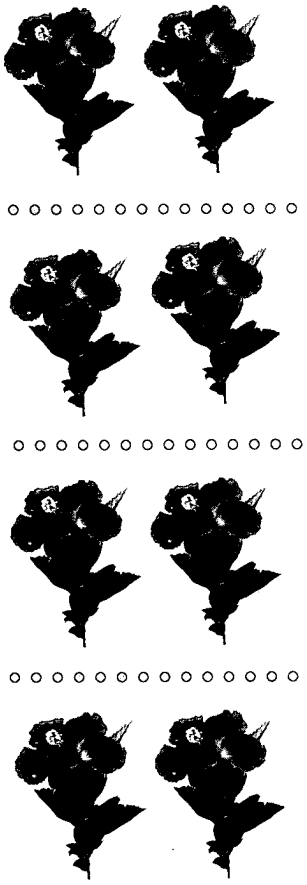
5 groups of 4 equal 20.

There are 20 books altogether.

Let's Learn!

Addition of equal numbers

There are 4 rows of flowers.
Each row has 2 flowers.



How many flowers are there altogether?

There are 4 rows of 2.

$$2 + 2 + 2 + 2 = 8$$

4 groups of 2 equal 8.

4 twos equal 8.

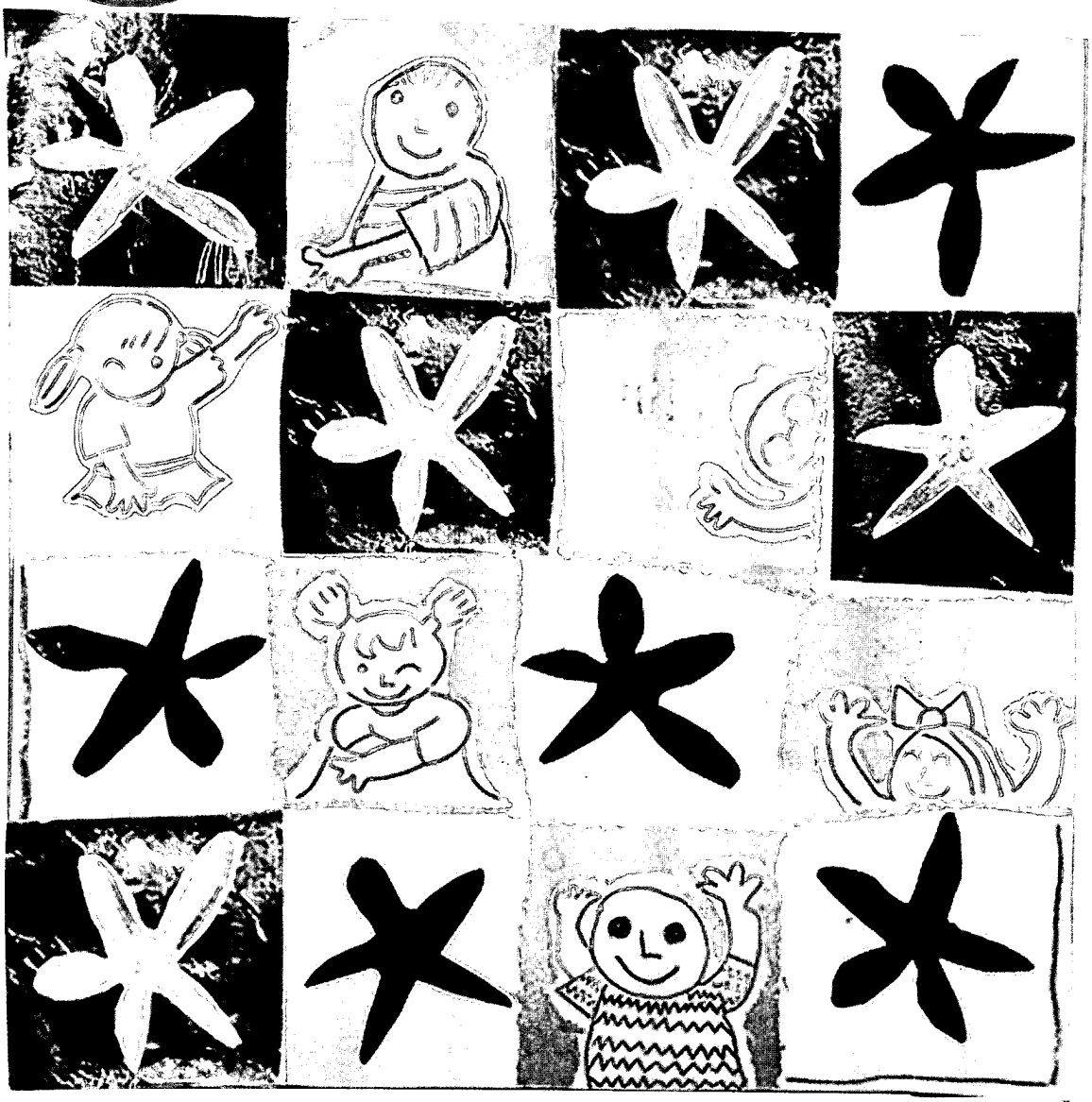
We write: $4 \times 2 = 8$

We say: Four times two is equal to eight.

There are 8 flowers altogether.

This is multiplication. It means adding together equal groups.

MULTIPLICATION

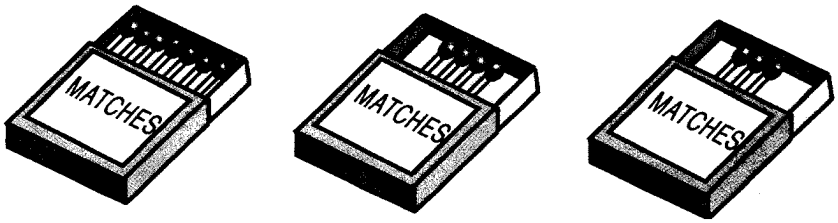


How many rows of pictures can you see?
How many pictures are in each row?
How many pictures are there altogether?

Practice 1C

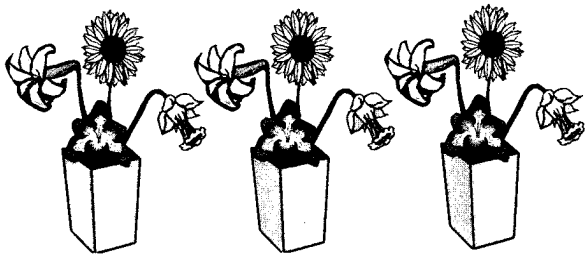
1. Do these.

(a)



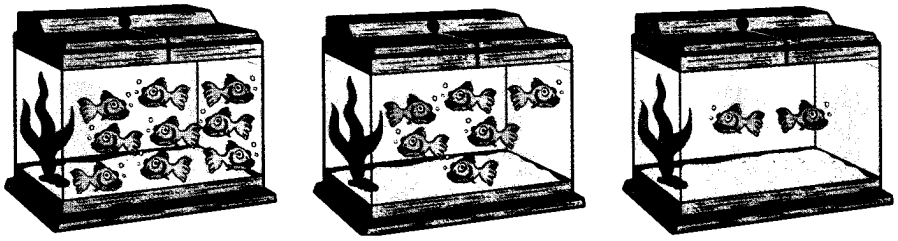
$7 + 4 + 3 = \square$

(b)



$4 + 4 + 4 = \square$

(c)



$9 + 6 + 2 = \square$

	7	
1	5	
	3	

Fun With Maths

Look at the magic square. All the numbers must add up to 15 in every direction.

Can you fit in the missing numbers?

2	8	6	4

We can add in other ways too.
We can add 4 and 3 first, then add 6 to get the answer.

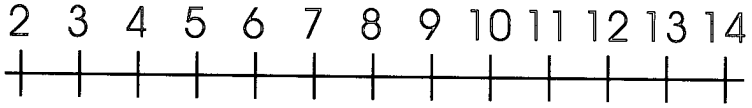
$$4 + 3 + 6 = 7 + 6 = 13$$

We can add numbers in any order.

Or we can add 6 and 3 first, then add 4 to get the answer.

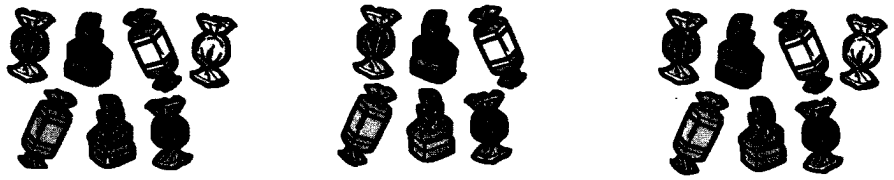
$$6 + 3 + 4 = 9 + 4 = 13$$

Can you use this number line to find the answer to 6 + 3 + 4?



Let's Try

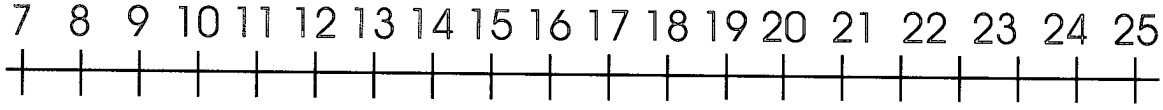
1.



How many sweets are there altogether?

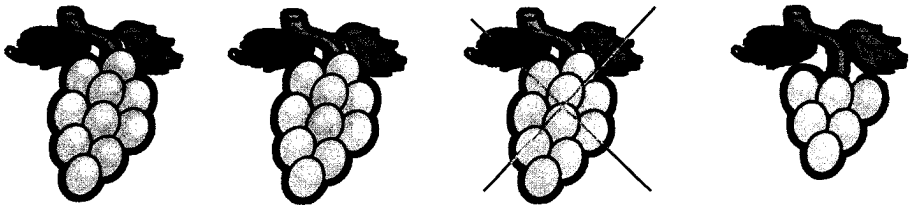
$$\square + 6 + \square = \square$$

2. Can you add 7, 8 and 9 on the number line?

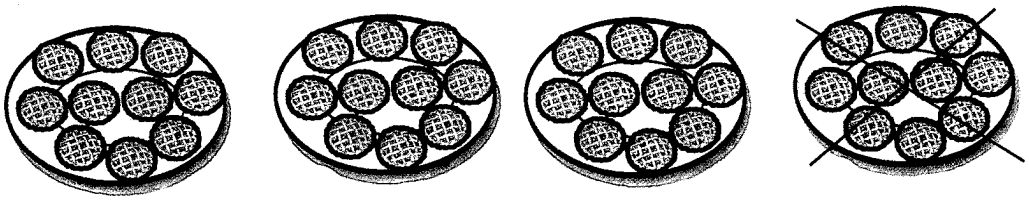


$$7 + 8 + 9 = \square$$

(c) 36 − 10 = ☐



(d) 40 − 10 = ☐



Let's Learn

Addition of 3 numbers

How many chairs are there altogether?

We can add 6 and 4 first.

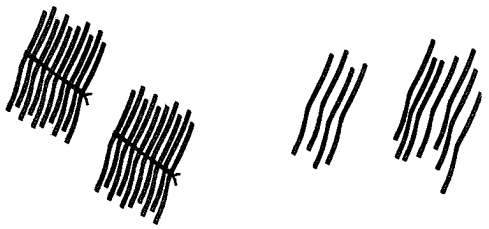
6 + 4 = 10

Then add 3 to get the answer.

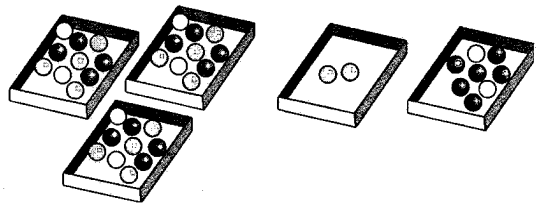
10 + 3 = 13

So, 6 + 4 + 3
= 10 + 3
= 13

2. Add.

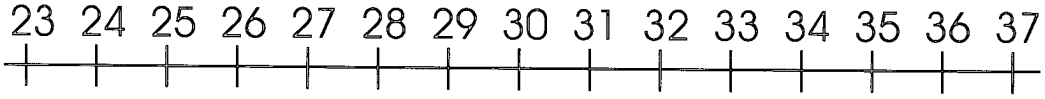


(a) 24 + 7 = ☐



(b) 32 + 8 = ☐

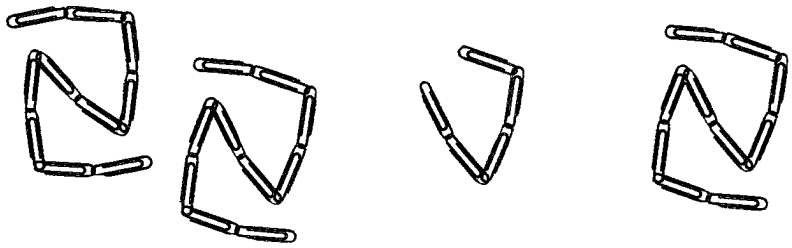
3. Subtract.



(a) 32 − 7 = ☐ **(b)** 35 − 9 = ☐

4. Fill in the missing numbers.

(a) 25 + 10 = ☐



(b) 19 + 10 = ☐

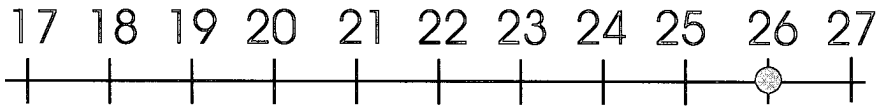
There is 1 plate of 10 cookies and a plate of 8 cookies left.

$10 + \square = \square$

So, $26 - 8 = \square$

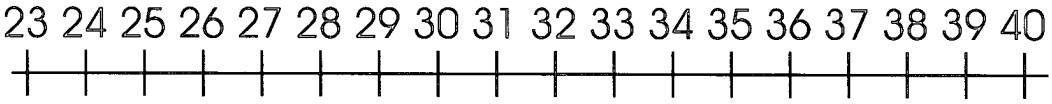
Can you count backwards from 26 to get the answer?

Can you use this number line to find the answer?



Practice 1B

1. Fill in the blanks with the help of the number line.



(a) 1 more than 24 is $\square$.

(b) 2 more than 29 is $\square$.

(c) 1 less than 40 is $\square$.

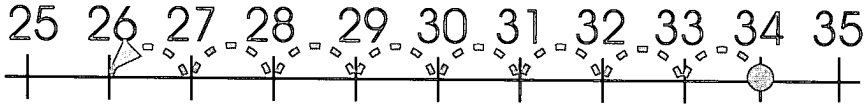
(d) 2 less than 36 is $\square$.

Method 2

We can count backwards 8 from 34 to get the answer. 33, 32, 31, 30, 29, 28, 27, 26

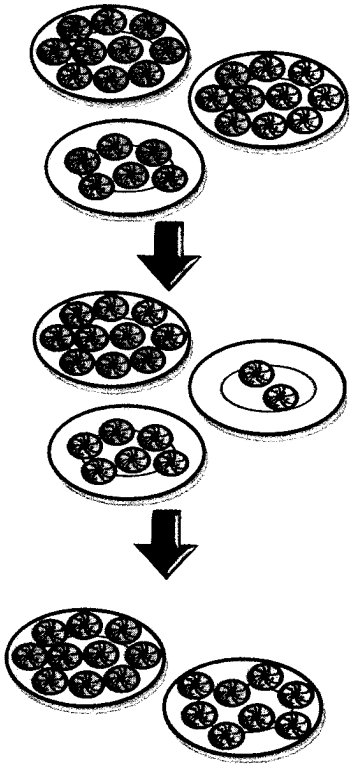
Method 3

A number line can also be used to find the answer when 8 is subtracted from 34.



Let's Try

There are 26 cookies. How many are there left if Tom ate 8?

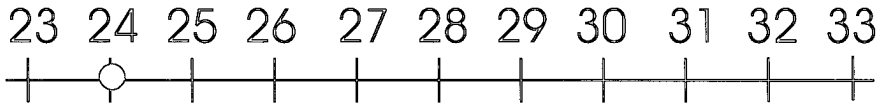


2 plates of 10 cookies
and 1 plate of 6 cookies
make 26 cookies.

Take 8 away from a plate of 10.

Add 2 to 6 to make 8.

Can you use this number line to find the answer?



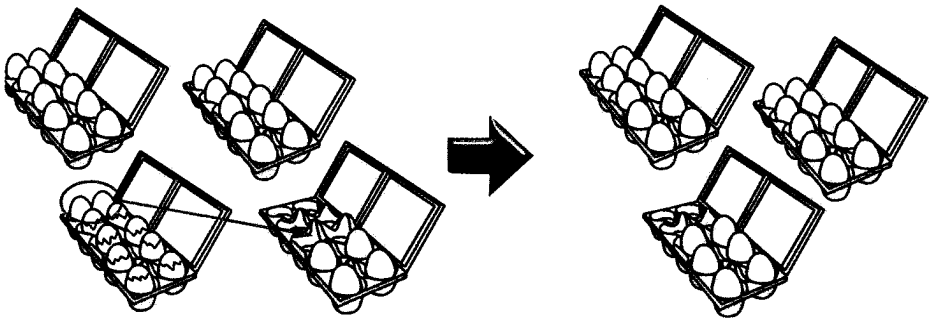
Let's Learn

Subtraction

8 eggs are taken from 34 eggs. How many eggs are left?

Method 1

There are 3 tens and 4 ones in 34.
Take 8 away from 1 ten.



Add 2 to 4 to make 6 eggs.

There are 2 trays of ten eggs each and 1 tray of 6 eggs left.
2 tens and 6 ones make 26.

34 − 8 =

30 4

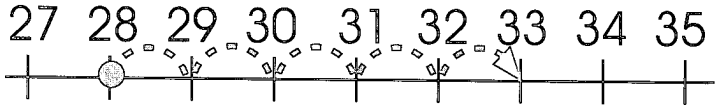
Method 2

We can count on 5 from 28 to get the answer.

29, 30, 31, 32, 33.

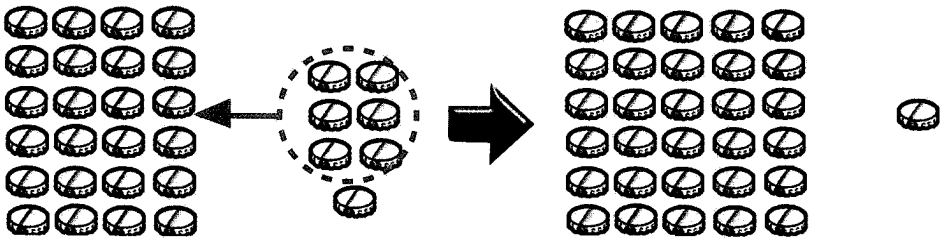
Method 3

We can also use a number line to find the answer.



Let's Try

Add 7 bottlecaps to 24 bottlecaps.



Add ☐ to 24 to make 30.

Add 30 and ☐ to make ☐.

$$24 + 7 = 30 + \square$$

$$7 = 6 + 1$$

There are ☐ bottlecaps in all.

Can you count on 7 from 24 to get the answer?

4. Fill in the missing numbers.

(a) 20 and ☐ make 27.

(b) ☐ and 2 make 32.

5. Complete these number patterns.

(a) 10, 20, _____, _____

(b) 40, 39, _____, 37, _____, _____

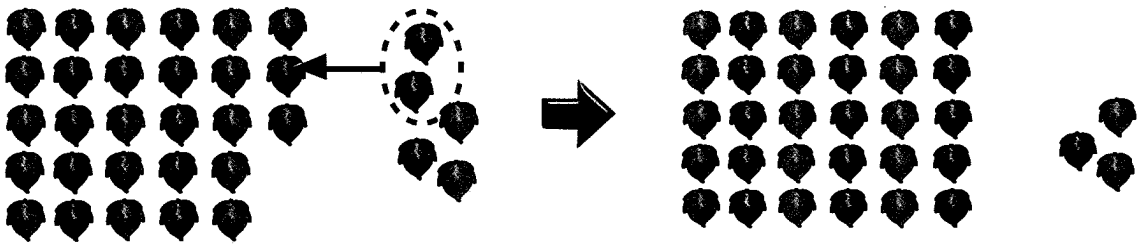
Let's Learn

Addition

Add 5 leaves to 28 leaves.

Method 1

We can make a ten, then add the tens and ones to get the answer.



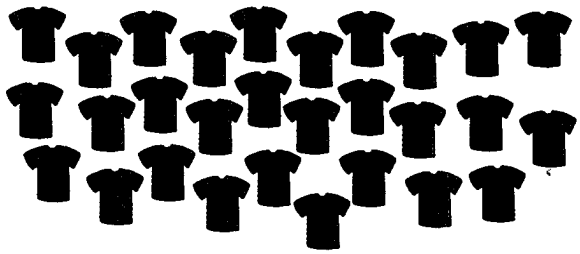
$$28 + 5 = 30 + 3$$

$$= 33$$

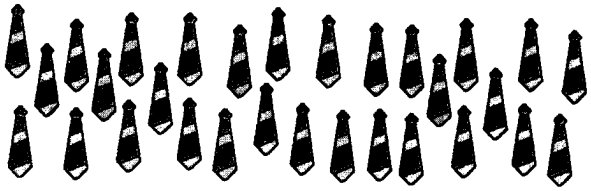
(5 = 2 + 3)

3. Circle groups of ten. Then fill in the blanks.

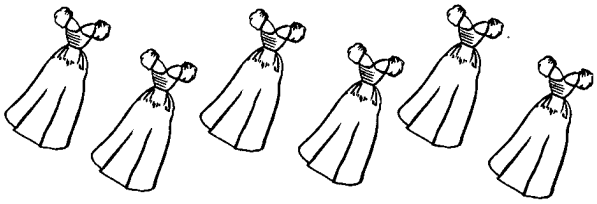
(a) 29 has ☐ tens and ☐ ones.



(b) 30 has ☐ tens and ☐ ones.



(d) 6 has ☐ tens and ☐ ones.



Practice 1A

1. Write the following in words.

(a) 23 **(b)** 30 **(c)** 39

2. Write the following in numbers.

(a) twenty-six **(b)** thirty-one

3. Fill in the blanks.

(a) There are four tens and zero ones in ☐.

(b) There are 2 tens and 2 ones in ☐.

(c) There are zero tens and zero ones in ☐.

In-Class Activity

Pick a number from the number bag.

When everyone in the class has a number, the teacher will ask questions, for example, "What is 3 tens and 5 ones?". If you have the number "35", put up your hand and say "thirty-five".

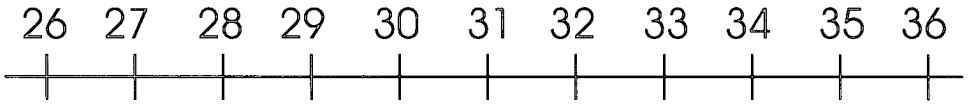
Let's Try

1. Complete these number patterns.

(a) 25, _____, _____, 28, 29, 30, _____, _____

(b) _____, 39, _____, _____, 36, 35, 34, _____

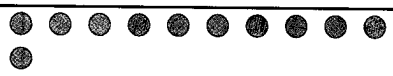
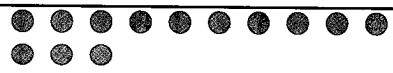
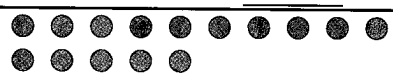
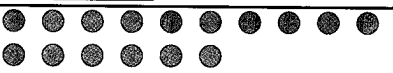
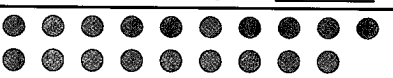
2.



(a) Write the number just after 27 in words.

(b) What is the number just before 35?

(c) What is the number between 29 and 31?

31	thirty-one	30 and 1 3 tens and 1 one
		
32	thirty-two	30 and 2 3 tens and 2 ones
		
33	thirty-three	30 and 3 3 tens and 3 ones
		
34	thirty-four	30 and 4 3 tens and 4 ones
		
35	thirty-five	30 and 5 3 tens and _____ ones
		
36	thirty-six	30 and 6 3_____ and 6 ones
		
37	thirty-seven	_____ and 7 3 tens and 7 ones
		
38	thirty-eight	30 and _____ 3 tens and 8 ones
		
39	thirty-nine	30 and 9 3 tens and 9 _____
		
40	forty	30 and 10 ____ tens
		

Count on from 20

21	twenty-one	20 and 1 2 tens and 1 one
22	twenty-two	20 and 2 2 tens and 2 ones
23	twenty-three	20 and 3 2 tens and 3 ones
24	twenty-four	20 and 4 2 tens and 4 ones
25	twenty-five	20 and 5 2 tens and 5 ones
26	twenty-six	20 and 6 2 tens and 6 ones
27	twenty-seven	20 and 7 2 tens and 7 ones
28	twenty-eight	20 and 8 2 tens and 8 ones
29	twenty-nine	20 and 9 2 tens and 9 ones
30	thirty	20 and 10 3 tens

Let's Learn

Tens and ones

Here are 14 oranges.

10 and 4 make 14.

There are 1 ten
and 4 ones in 14.

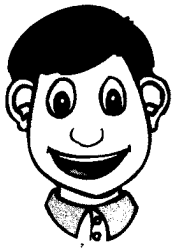
Remember:

10 and 1 make 11.
10 and 2 make 12.
10 and 3 make 13.
10 and 4 make 14.
10 and 5 make 15.
10 and 6 make 16.
10 and 7 make 17.
10 and 8 make 18.
10 and 9 make 19.
10 and 10 make 20.

How many tens and ones are there in 20?

Twenty

10 + 10 = 20



10 and ☐ make 20.

There are ☐ tens and ☐ ones in 20.

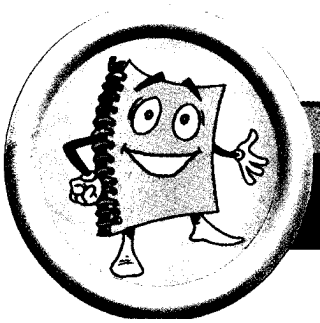
CHAPTER 1

NUMBERS TO 40

How many groups of 10 of the same type of fruits do you see?

Can you say how many pears there are altogether?

How many apples are there altogether?



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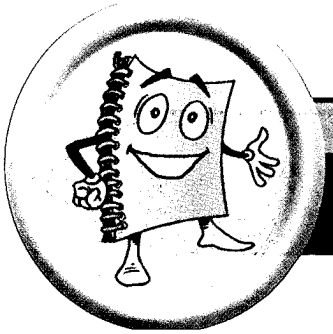

PREFACE

The *Thinking Mathematics* series is based on the latest primary mathematics syllabus. In this series, the concrete-pictorial-abstract format is used to introduce new concepts. The spiral approach is used throughout the series to consolidate and link mathematical concepts.

The series comprises textbooks and workbooks at each level. Textbook 1B comprises 8 units. Each unit is prefaced by a relevant situation from daily life and followed through with the following sections:

Do You Know? Relevant, *thought-provoking* questions are asked with regard to the real life situation presented at the beginning of each unit to *link mathematics and daily life.*

Let's Learn New concepts are explained in a straight-forward and interesting way. *Creative* and *critical thinking,* as well as *an awareness of problem-solving strategy* are developed through worked examples in this section.

Let's Try Guided sums are provided to confirm and consolidate the concepts taught.

Practice Exercises involving *critical* and *creative thinking* are provided to encourage pupils to look for alternative strategies in problem-solving and thus help them grow into *independent and active learners.*

In-Class Activity Active participation from pupils and creative *application of mathematics to daily life,* including *IT* and hands-on activities, helps to develop lifelong learners. Cooperation and team spirit are encouraged through *group and pair work.*

Fun With Maths Mathematical concepts are extended beyond the boundaries of the classroom and brought into the realm of exploration and experiment to further engage and develop the pupil's interest in mathematics.

Other features of this series include:

National Education This is integrated, whenever applicable, into the series to promote a sense of nationality in the pupils.

Revision Exercises are provided to assist pupils in reviewing the concepts and skills learnt as part of examination preparation.

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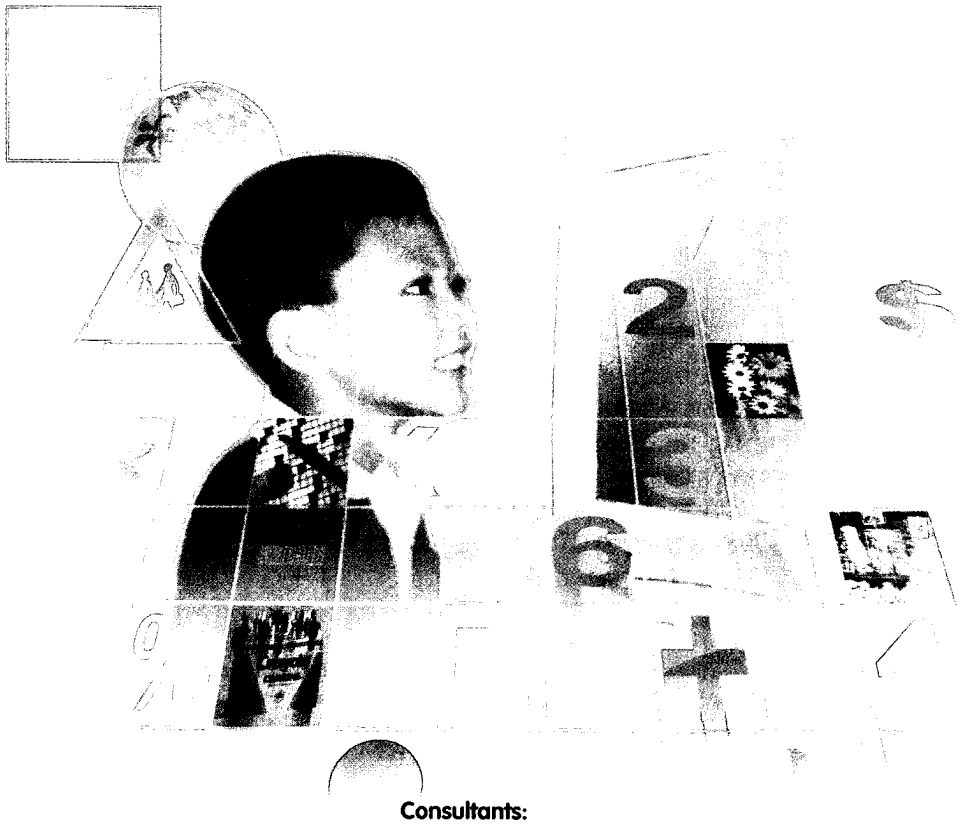

Consultants:
Prof. Foong Pui Yee • Dr. Fan Liang Huo

Authors:
Foong Pui Lin (BSC., Dip. ED.) • Chong Yee Lin (BSC.)

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