

7

Time Goes On



Ultra Pulta Time — This is a story with topsy turvy time.



As the sun **sets** _____ Sumana wakes up. What a lovely **evening!** _____ She washes her face fast in 2 **hours** _____ and runs out. She goes straight to the bird's nest. She has been watching the eggs for the last few **months** _____. She was waiting for the baby birds to come out. But before she can blink her eyes, in a **week** _____ a cat jumps on to the tree. The mother bird cries loudly and Sumana rushes to shoo away the cat. As the cat jumps, it hits the big green mango. **Dhum!** ...

Dhum!

... In two **days** _____ it is on the ground ! Oh, how sad! The mango is still not fully ripe. It needed one more **year** _____ to become sweet. Suddenly Sumana's sister calls out Are you still not hungry? Has your stomach clock gone to sleep? Come and eat hot upma for **dinner** _____.

Wasn't that funny? You must have guessed that the coloured words are wrong. Choose the correct word from the box given below and write it next to the wrong word.

days	rises	seconds	morning
breakfast	moment	minutes	week

How Long does it Take?

Have you seen someone knitting a sweater? Or someone weaving a cloth? Do try to find out from a potter how long it takes to make a pot. Also tell us if you take hours or minutes to have your bath! (Is it years since you last had a bath? Ha, ha!)

Think of many different things that can take different times. Make your table as long as you can.



<i>Takes minutes</i>	<i>Takes hours</i>	<i>Takes days</i>
a bath	to stitch a shirt	to knit a sweater
to boil milk	to set curd	to weave a sari
	a school day	for a banana to become ripe



Think of some other things, some faster and some slower. Make a long list.

Takes seconds

to blink my eyes to snap my fingers to gulp my medicine



for fruit to fall from a tree

Takes months

to grow wheat (from seed to big plant)

to change from summer to winter

for a baby to come out of its mother's stomach



This activity should take only a few minutes.



Clap! Clap! Before you Catch**Play this game**

Throw a stone into the air. Clap once before you catch it.

Now try to clap 2 times before the catch.

Try more claps. How many times can you clap before you catch the stone?

**Ta Thai — Different Claps**

Clap 2 times and say 1 2

Keep clapping 1 2, 1 2, 1 2,

or say *Ta Thai, Ta Thai, Ta Thai,*

Also stamp your feet Left Right, Left Right, Left Right,

Now clap with three beats 1 2 3, 1 2 3, 1 2 3,

Say: *Ta Thai Tut, Ta Thai Tut, Ta Thai Tut,*

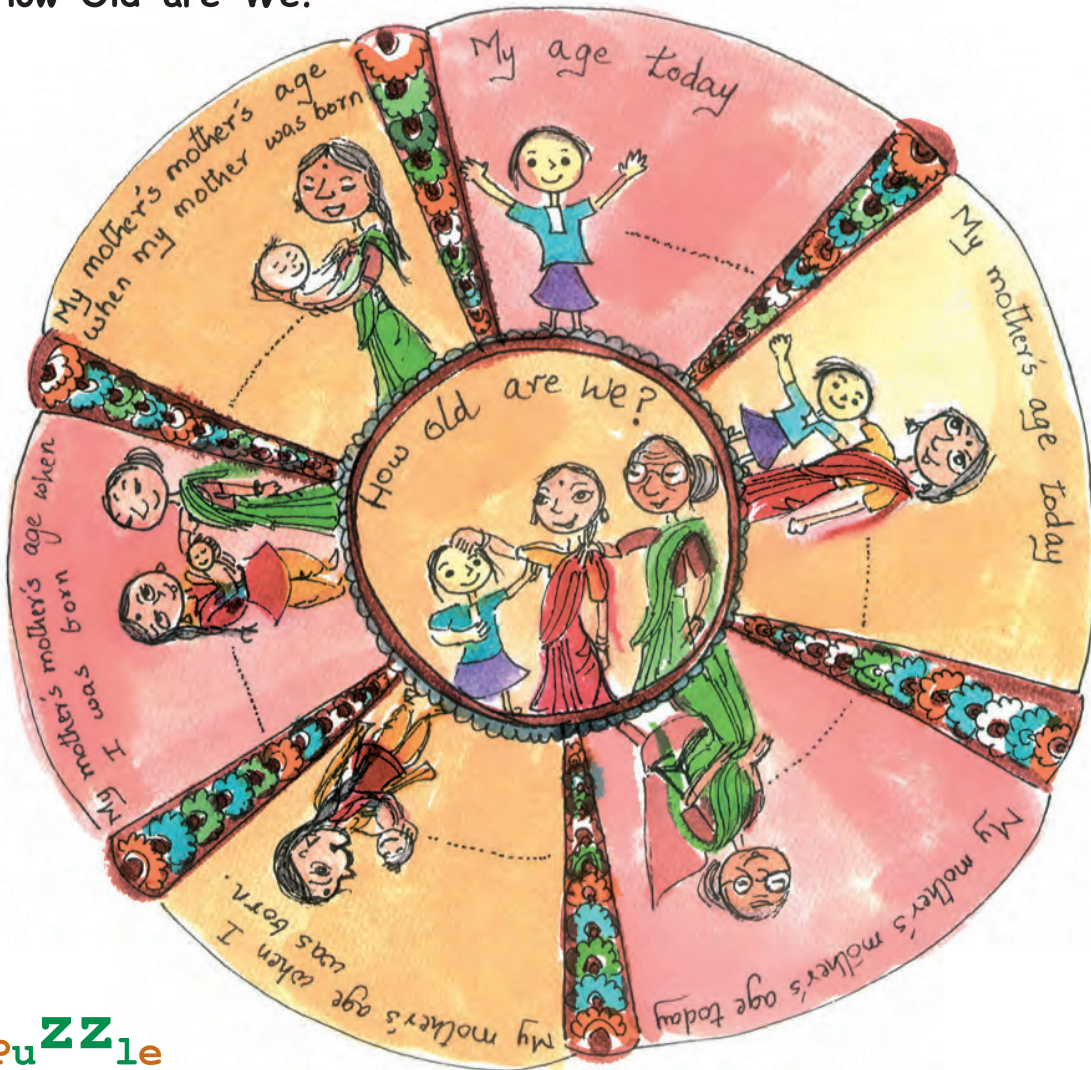
Can you stamp your feet Left Right Left, Left Right Left,

How many of you can speak and stamp at the same time?

**Find Out**

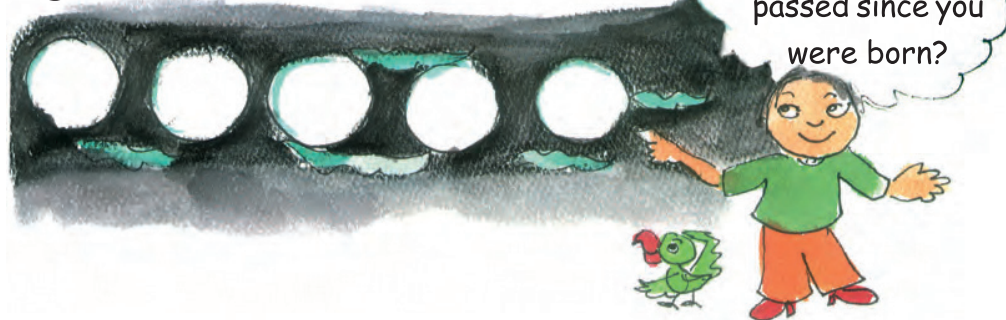
Have you heard people playing a *tabla* or the drums? Find out a few different beats they play. Also ask what 'bols' they say for the beats they play.

How Old are We?



Puzzle

Irfan's mother is twice as old as him.
She is also 20 years older than him.
Guess the ages of Irfan and his mother.



Birth Certificate

Look at the birth certificate of Shakeela

Form Number 5
Government of Jammu and Kashmir
Birth Certificate

This is to certify that this information is taken from the original record of birth which is in the register for the year 2002 of Sopore

Name	<u>Shakeela Bano</u>
Sex	<u>Female</u>
Date of birth:	<u>02 / 05 / 2002</u> <u>(Second May, Two Thousand Two)</u>
Place of birth:	<u>Lal-Ded Hospital</u>
Name of Father:	<u>Gulam Mohd</u>
Name of Mother:	<u>Raja Begum</u>
Date of Registration:	<u>02 / 05 / 2002</u>
Registration Number	<u>815 / 02</u>

Date 05.08.2002 Signature of issuing authority



- (1) 2/5/2002 shows that Shakeela was born on 2 _____, in the year 2002.
- (2) How old will Shakeela be on May 2008? _____.
- (3) How old will she be in the year 2052? _____.
- (4) On what date will she be eight years old? Write in numbers.

- (5) How many months old was Shakeela on 2 August 2002? _____
- (6) How many years old is Shakeela now? _____
- (7) After how many months of her birth was the certificate issued? _____
- (8) What is the registration number of her certificate? _____

Find Out

When were you born? _____

Write your date of birth in numbers. _____

Do you have a birth certificate? Ask your parents and make one for yourself.

Form Number _____

Government of _____

Birth Certificate

This is to certify that this information is taken from the original record of birth which is in the register for the year _____ of _____

Name _____

Sex _____

Date of birth: _____

Place of birth: _____

Name of Father: _____

Name of Mother: _____

Date of Registration: _____

Registration Number _____

Date _____ Signature of issuing authority _____

Calendar 2020

January

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		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	

February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						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

March

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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				

April

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		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		

May

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					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						

June

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	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				

July

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		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	

August

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						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					

September

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	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			

October

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				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

November

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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					

December

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	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		

Calendar

Let us look at the calendar for the year 2020.

- * How many months does a year have? _____
- * List the months which have 30 days. _____
- * List the months which have 31 days. _____
- * How many days does the month of February have? _____
- * How many days makes a week? _____
- * How many weeks are there in July? _____ Is it true for all the months? _____
- * In which month did you come to Class III?
- * Make a circle on these dates in the calendar:
 26th January
 14th November
 31st December.

Is there something special about these dates?

Fill in the blanks with the correct year:

2019	2022	2021	2018	2023	2024
------	------	------	------	------	------

1. Which year was it two years back? _____
2. In which year were you in Class II? _____
3. Which year will be the next year? _____
4. Which year will come after 3 years? _____

This chapter encourages children to look at different cultural contexts in which the idea of elapsed time occurs in their lives. It is more important for them to be able to develop an intuitive estimate of seconds, minutes, months etc. than to actually measure. The chapter also helps them to understand the use of a clock and calendar through interesting exercises. Teachers could create more such exercises related to number patterns and symmetries.

Which Festival comes First?

Given below are some festivals we celebrate during the year. Look at the calendar (2020) to find the days on which these fall.

Name of the festival	Date	Day
Diwali	November 14	
Eid-ul-Fitr	May 25	
Raksha Bandhan	August 3	
Gandhi Jayanti	October 2	
Milad-un-Nabi	October 29	
Mahashivratri	February 21	
Guru Nanak's Birthday	November 30	
Janamashtmi	August 12	
Christmas Day	December 25	

✱ Arrange the festivals in the order in which they come in the year.

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

✱ Which festival comes in the beginning of the year?

✱ Which festival comes at the end of the year?

Calendar Magic

Here is the calendar for the month of February 2020

Let us mark a square on the calendar and see some magic.

February 2020

S	M	T	W	T	F	S
						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	



Which is the number in the centre of the square? _____

Join three numbers by drawing a line. The line must pass through the number at the centre.

5	6	7
12	13	14
19	20	21

How many such lines can you draw?

Add the three numbers on each of these lines.

What do you notice?



$$5 + 13 + 21 =$$

$$6 + 13 + 20 =$$

$$19 + 13 + 7 =$$

$$12 + 13 + 14 =$$

* Now look at the calendar of 2020. Also look for the present month and draw any similar square in your notebook. Does the magic work for these?

* Is this magic possible on a 10×10 number chart? Go to the chapter 'Fun with Numbers' and check.

More Magic!

March 2020

S	M	T	W	T	F	S
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				

I can add five numbers in the box in a moment.

Oh! that will take some time.

The total is 75.

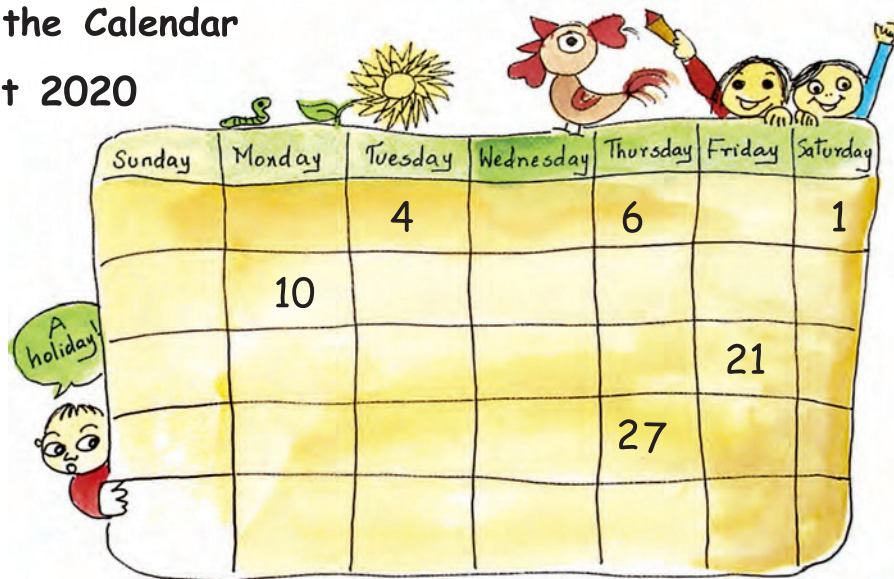
That's right! How did you do that?

Simple. Just multiply the middle number by 5.

See if this magic works for other lines which have five numbers. What about five numbers on a slanting line? Try this trick with your family and friends.

Can you find other magic patterns in the calendar?

Complete the Calendar for August 2020



Colour all the Sundays in red.

On which day does this month end? _____

Write the number of days in this month. _____

What day is it on 13th August? _____

What is the date on the second Saturday? _____

Is the 23rd a Sunday? _____

What is the day on the 29th? What will be the date on the same day next week? _____

How many Thursdays are there in this month? _____

Find Out!

Which months in the calendar 2020 have 5 Sundays?

Is there any other day in any month which comes 5 times?

Can there be 6 Sundays in a month? Why?

Ask such questions for the current month and also other months. Encourage students to discover more patterns through a calendar.

The True Story of Pedki Devi



My Time Line

My name is Pedki Devi. I live in a village in Dhanbad district (Jharkhand). I never got a chance to go to school. I remember that when I was 5 years old I broke my foot. I had climbed a tree to eat the jamun fruit. But the branch broke and I fell down. My foot still hurts in winter.

While grazing our goats we often got busy in playing. Once at the age of 10 years I got a big scolding I had lost one goat! At the age of 15 years I was married. My husband was much older than me. My first daughter was born three years after my marriage. Later I had three more children when I was 20, 22 and 24 years old.

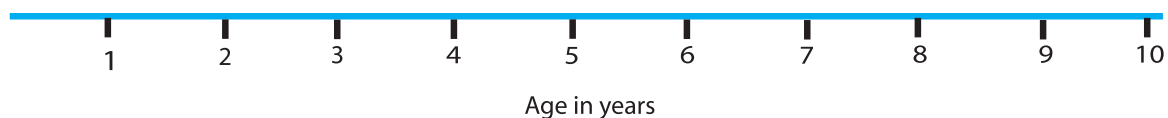
Time passed very fast then. I was busy with my farm, housework and looking after my animals. But at the age of 35 years my world came to a stop. My husband fell ill and died. His brothers tried to take away our farm. They beat me badly and said I was a witch! Some good people saved me. We fought a case against those who beat me up. At the age of 40 years I saw a police station for the first time. When I was 45 I learnt to read and write. 2 years later I got my eldest daughter married. Now I am 50 years old. I enjoy playing with my grandchild. Two of my children are studying in school.

Some things that happened in her life are given below. Mark these on her time line. For example, when she was 5 years old Pedki broke her foot. A is marked at 5 on the time line.

- A. Broke her foot
- B. Lost one goat
- C. Got married
- D. Had her fourth child
- E. First saw a police station
- F. Learnt to read and write
- G. Eldest daughter got married



- * Mark on the time line when she was born.
- * In the blank box draw a picture of Pedki as a new born baby.
- * Make your own time line. Ask people around you and mark at least one thing that happened in each year of your life.



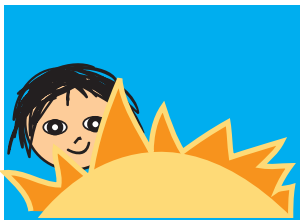
- * Make time lines of people you admire. These can be from among your family, friends, teachers, etc.

One Day in the Life of Kusum

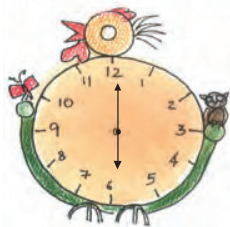
Let's see what Kusum does every day.

Write down the time for each picture.

For some pictures the time is already written and you must draw the hands on the clock. In others you have to write the time shown by the clock.



Kusum gets up early in the morning.



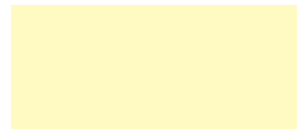
She brings water from the well.



At six -thirty in the morning



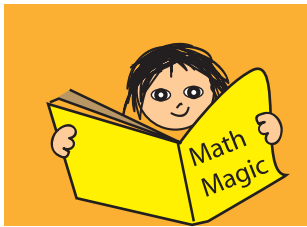
She cleans her house.



She goes to school.



At eight o'clock



She is studying in school.



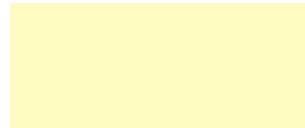
She comes back from school.



1 o'clock in the afternoon



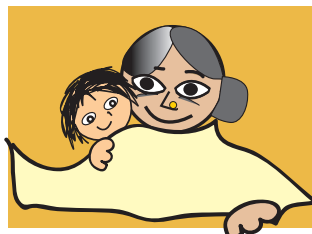
She takes lunch with her brother and grandmother.



She plays with her friends.



Five-thirty in the evening



She listens to a story from her grandmother before she sleeps.



9 o'clock at night

Now prepare a chart showing your own daily routine.

Time of the day		
In words	On the clock	What do you do at this time?
		
		
		
		
		
		
		

8

Who is Heavier ?

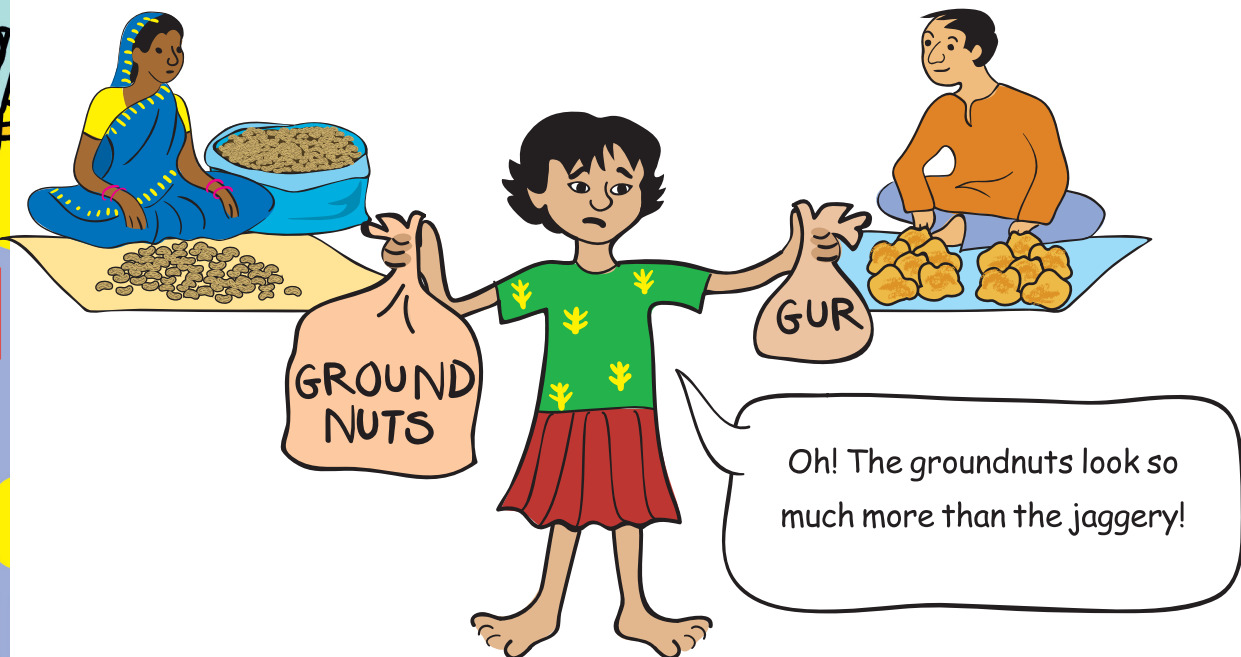


Gur (jaggery) and Groundnuts

Shabnam loved to eat jaggery (gur) and groundnuts.

One day she bought 1 kg of jaggery and 1 kg of groundnuts.

(You know that kilogram is also written as kg.)

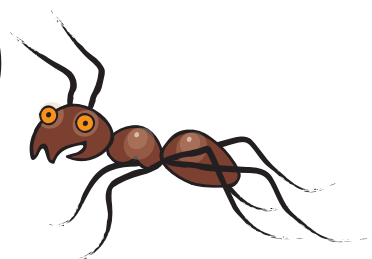


- * Are the groundnuts really more than the jaggery (gur) in weight or do they just look more?

Now guess, for which of these
you need a bigger bag:

- (1) 1 kg popcorn or 1 kg sugar?
- (2) 1 kg peas or 1 kg potatoes?

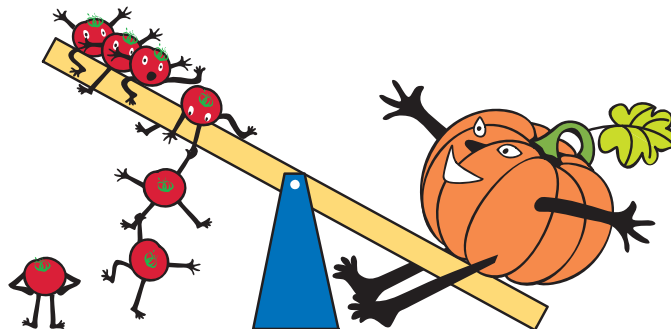
Go to the market and check if your guess is right.



Pumpkin Tomato 'Panga'

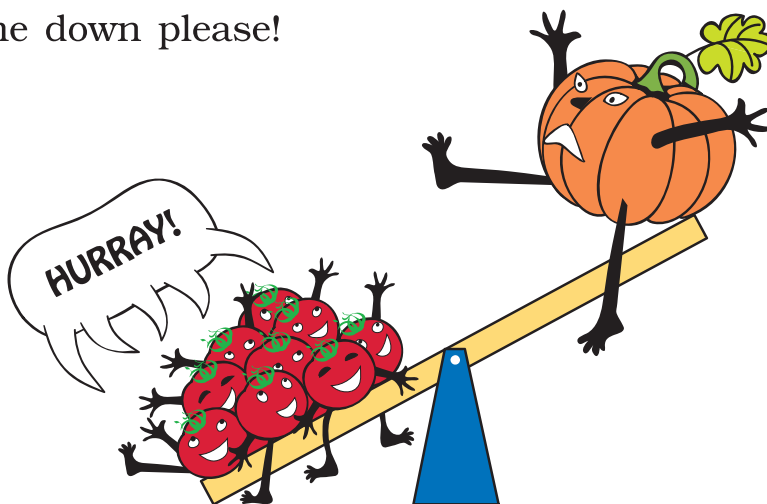
This is the playground where tomatoes come to play every day. They love playing on the see-saw. One day a big pumpkin comes and sits on one side of the see-saw. When he does not get up for a long time, the tomatoes decide to sit on the other side and lift the pumpkin up so that he falls off.

The little tomatoes start climbing on to the other side...1, 2, 3, 4, 5 25. Huh! The pumpkin is still sitting and laughing. So, the big tomatoes decide to help. The little ones get down

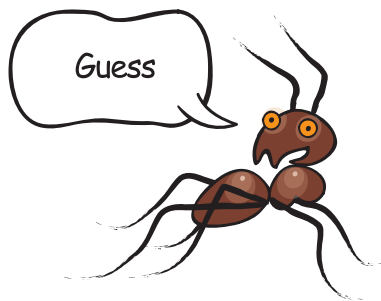


and make way for the fat ones. 1, 2, 3, 4 20.

Yeah! The pumpkin is up in the air. It shouts — Bring me down, bring me down please!



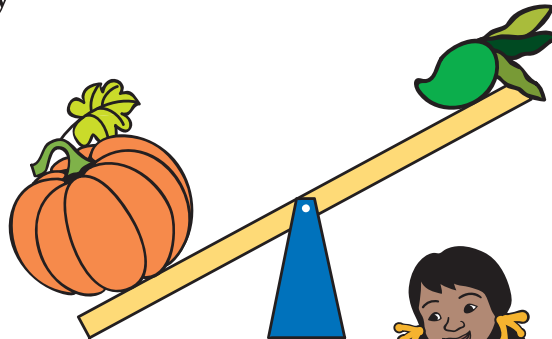
'Panga' is a colloquial word which gives the sense of a problem or a quarrel. It has been used deliberately because children can find it amusing.



* How many small tomatoes do you think could lift the pumpkin up?

- Ten
- Twenty
- Forty

* How many big mangoes can balance the pumpkin?



* How many pumpkins can balance you on the see-saw?



* Name some of your classmates who you think weigh

(a) Almost the same as you

(b) More than you

(c) Less than you

* How many books can you lift on one hand keeping your arm straight?

Double her Weight

Kunjamma's parents have a different way of celebrating Independence Day because Kunjamma was born that day. They buy sweets double of Kunjamma's weight and distribute them among poor people.



When Kunjamma was born, she was 3 kg. Today is Independence Day and Kunjamma is 5 years old. She is 28 kg now.

* Now guess her weight and the amount of sweets her parents distribute every Independence Day.

<i>Kunjamma's age</i>	<i>Kunjamma's weight</i>	<i>Amount of sweets</i>
At birth	3 kg	$3 + 3 = 6$ kg
1 year old	9 kg	_____
2 years old	_____	$13 + 13 = 26$ kg
3 years old	17 kg	_____
4 years old	_____	_____
5 years old	28 kg	_____

You can ask your parents how much a 2-year old or 4-year old child could weigh.

Guess your own weight

Yum-yum Rice

Shugoto heard about a new dish on the radio. He wants to try making it. When he notes down how to make it, he gets confused.

This is what he notes down —

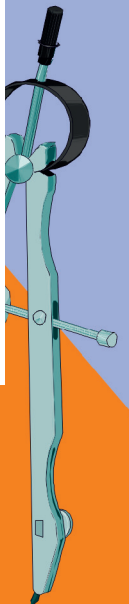
- (1) Pour **2 spoons** of water in the pot
- (2) Boil the water and add
 - **1 pinch** of daal
 - **half kg** red chilli powder
 - **1 bowl** salt
- (3) Now put **a spoon** of rice
- (4) Add **2** peas and **8 glasses** of mustard seeds
- (5) Finally add **1 kg** of onions

Mix everything and boil for 15 minutes.

But Shugoto feels there is something VERY wrong in the amounts of everything!!!

* Help him match the things with their right amounts.

1 kg	rice
half kg	daal
_____	peas
_____	water
_____	onions
_____	salt
_____	mustard seeds
_____	red chilli powder



B. Guess their weights and match.

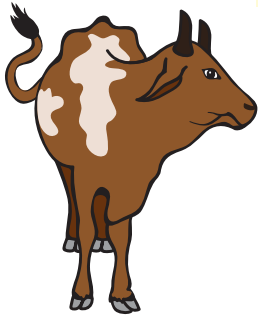


10 kg

400 kg

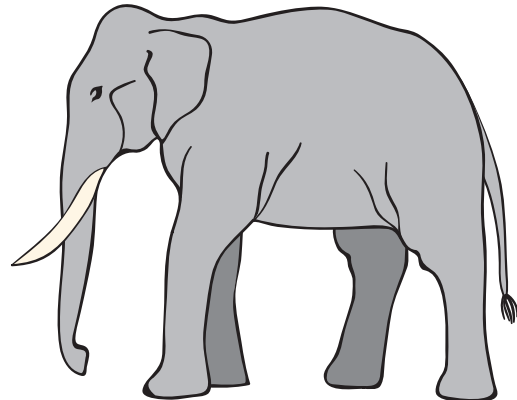
Less than 1 kg

More than 1000 kg



80 kg

2 kg



C. Guess which of the following things weigh more than 1 kilogram? Which ones will weigh less than 1 kilogram (kg)?

i) Your school bag



ii) Geometry box



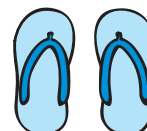
iii) A brick



iv) A big pumpkin



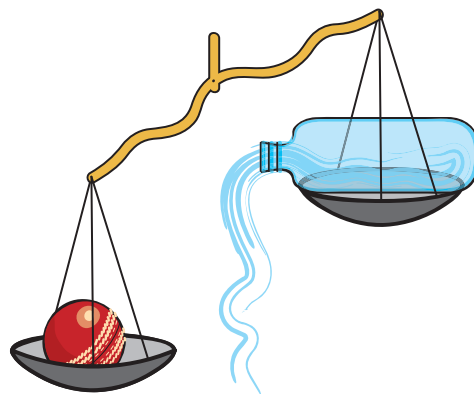
v) Your pair of slippers/shoes



Bring a balance and a 1 kg weight to class. Check if your guess was right.

D. Use your balance to find which of the following is heavier —

- i) A water bottle or a cricket ball
- ii) Your shoe or your pencil box
- iii) Your Maths book or Hindi book
- iv) Your bag or your friend's bag



E. Weigh 1 kg of mud or sand. Divide it equally into 2 bags. Use the balance to check if both the bags have equal weight.



Each bag of mud is your half-kg weight. Use it to weigh some other things around you.

* Make a list of

- i) Things weighing less than half kg.
- ii) Things weighing more than half kg.

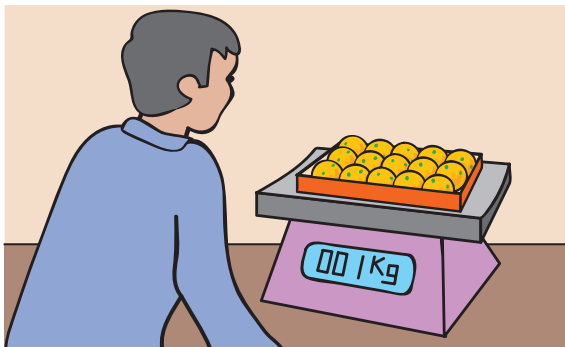
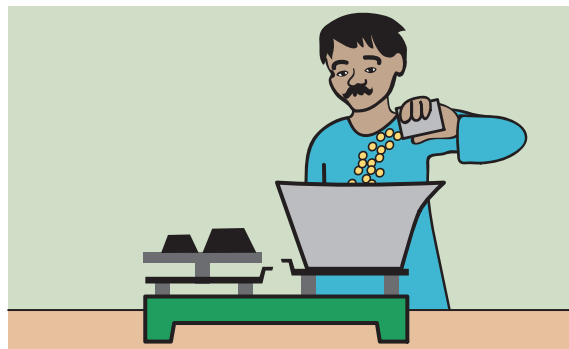
Different activities will help children to guess and estimate weights of familiar things they see at home, at the grocery shop, etc. Guessing the weights of animals is an enjoyable exercise and helps them get a feel of larger weights. Teachers must bring a balance to class and give them a chance to weigh things themselves.

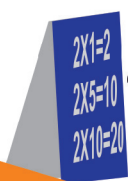
Look for Weights and Balances

Make a trip to your nearest junk dealer, vegetable shop and grocery shop. Have a look at the weights they use. Find out:

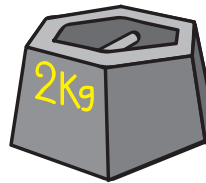
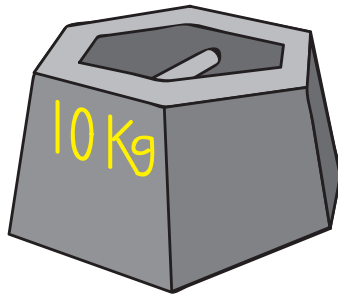
- Who uses the biggest weight?
- Who uses the smallest weight?

Have you seen any of these balances?

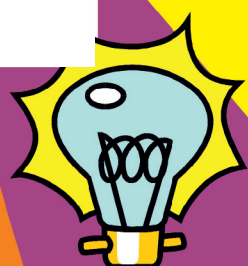




In which shop would you find the following types of weights?
Discuss with your friends.



% 1
X 1
= 50
+ 9



9

How Many Times



Leggy Animals

There are 5 goats.

How many legs altogether?

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

or 5 times 4 is 20

$$\text{or } 5 \times 4 = 20$$

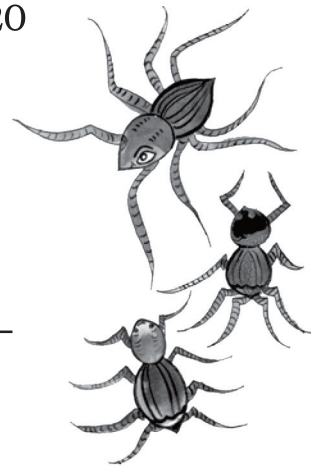
How many spiders? _____

One spider has _____ legs.

In all, spider legs are 3 times _____

$$\text{or } \square + \square + \square = \square$$

$$\text{or } 3 \times \square = \square$$



Do you know this leggy fellow?

This is an octopus.

It lives in the sea.

It also has 8 legs.

So how many legs altogether do 5 octopuses have?

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

$$\text{or } 5 \text{ times } \square = \square$$

$$\text{or } 5 \times \square = \square$$



Give me your hand, hand, hand,!

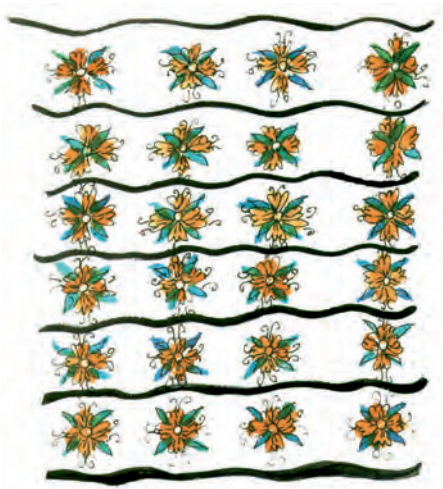
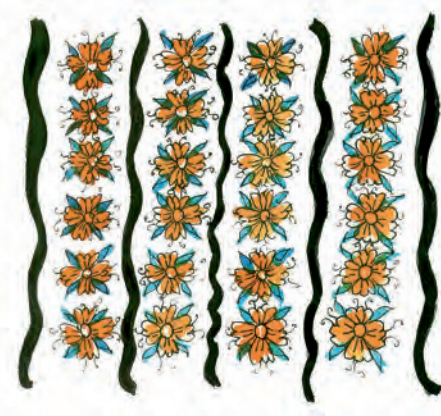
Find the Number without Counting

How many flowers in a flower bed?

It has 4 columns. Each column has 6 flowers. So altogether the flower bed has 4 times 6 flowers,

$$6 + 6 + 6 + 6 = 24 \text{ or}$$

$$4 \times 6 = 24$$



Let's try another way. The flower bed has 6 rows. Each row has 4 flowers. Altogether the flower bed has 6 times 4 flowers,

$$4 + 4 + 4 + 4 + 4 + 4 = 24$$

$$\text{or } 6 \times 4 = 24$$

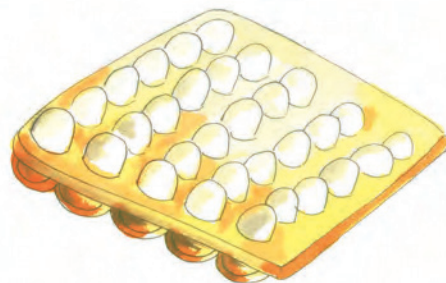


In the same way, how many bottles are these?

_____ times _____ = _____ bottles

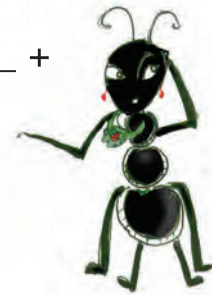
How many eggs?

_____ times _____ = _____ eggs



Practice Time

A. Rewrite using the + sign.

 2×5 is 2 times 5 or $5 + 5$ 4×18 is 4 times ____ or ____ + ____ + ____ + ____ 3×20 is ____ times ____ or ____ + ____ + ____ 8×9 is ____ times ____ or ____ + ____ + ____ + ____ + ____ + ____ + ____ + ____

B. Tell how many times!

$$9 + 9 + 9 + 9 + 9 + 9 = 6 \times 9 = 54$$

$$4 + 4 + 4 + 4 + 4 = 5 \times 4 = 20$$

$$8 + 8 + 8 = ___ \times 8 = ______$$

$$3 + 3 + 3 + 3 + 3 = 5 \times ___ = ______$$

$$30 + 30 + 30 = ___ \times ___ = ______$$

$$7 + 7 + 7 + 7 + 7 + 7 = ___ \times ___ = ______$$

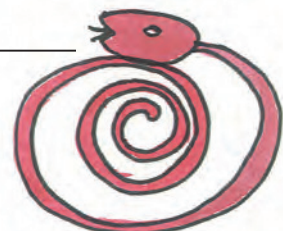
$$12 + 12 + 12 + 12 = ___ \times 12 = ______$$

$$6 + 6 + 6 = ___ \times ___ = ______$$

$$10 + 10 + 10 + 10 = ___ \times ___ = ______$$

$$2 + 2 + 2 + 2 + 2 = ___ \times ___ = ______$$

$$6 + 6 + 6 + 6 + 6 + 6 + 6 = ___ \times ___ = ______$$



C. Ramu bought 4 packets of biscuits. Each packet has 4 biscuits. How many biscuits did Ramu buy?

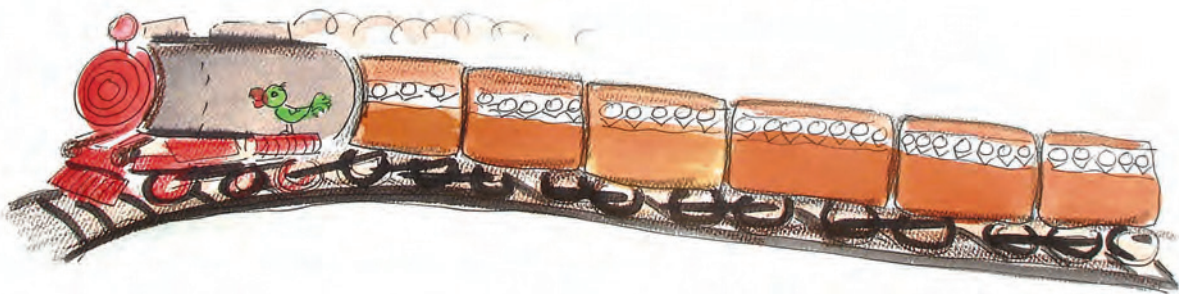


D. There are 12 desks in a classroom. Each desk has 4 legs. What is the total number of legs of the desks?



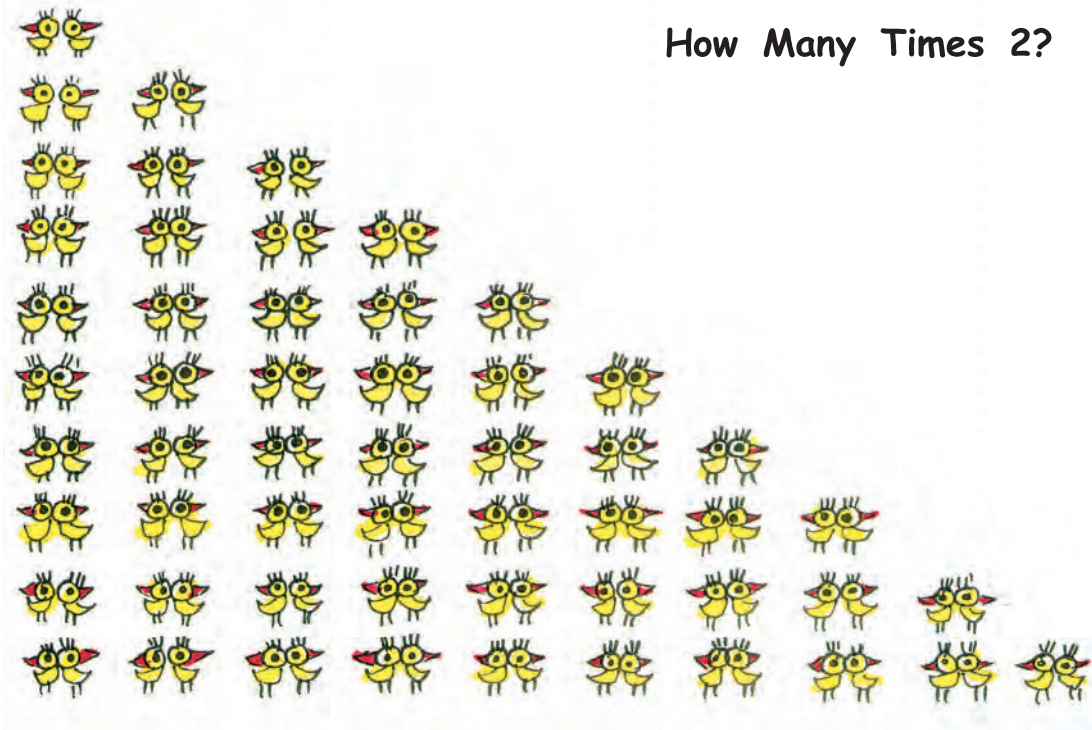
E. Sabiha brought home 3 bunches of flowers. Each bunch has 4 flowers. How many flowers were there?

F. One rail coach has 8 wheels. How many wheels in all in 6 coaches?



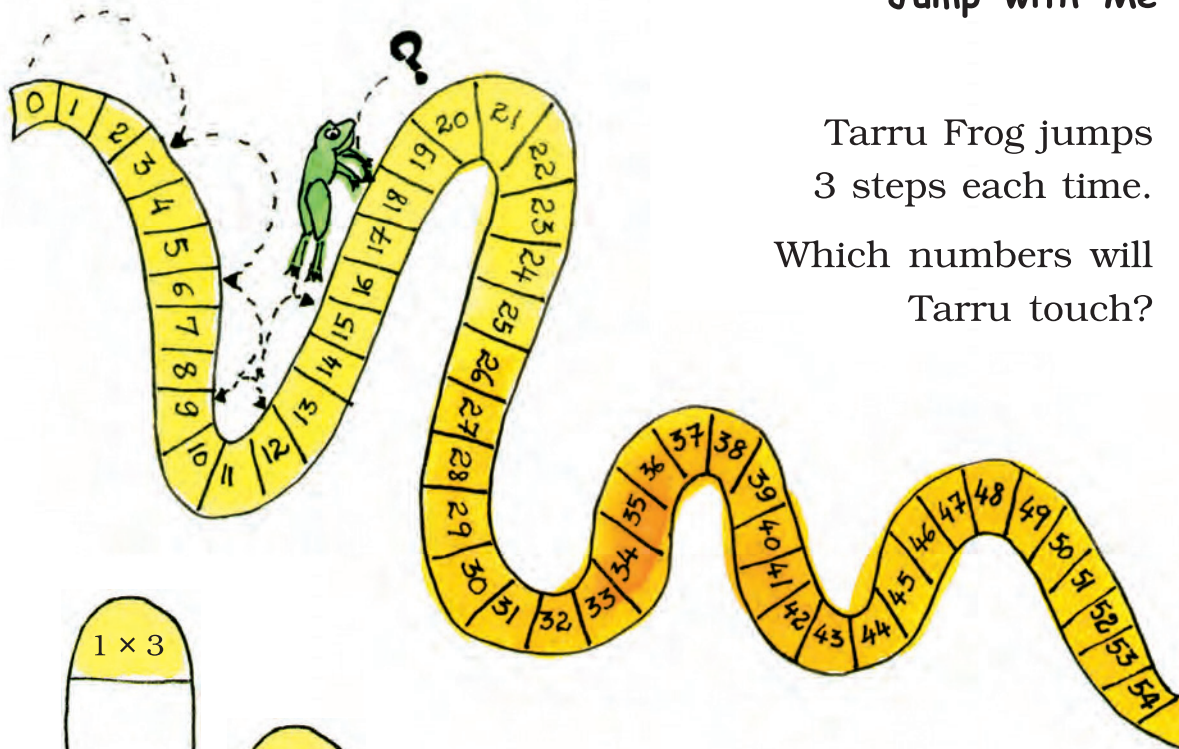
After children attempt word problems, there should be a discussion on how they arrived at their answers. This will help children develop a conceptual understanding of multiplication.

How Many Times 2?



1 time 2	is 2	or 1×2	= 2
2 times 2	is 4	or 2×2	= 4
3 times 2	is 6	or 3×2	= 6
4 times 2	is ____	or 4×2	= ____
5 times 2	is ____	or 5×2	= ____
6 times 2	is ____	or 6×2	= ____
____ times 2	is ____	or ____ $\times 2$	= ____
____ times ____	is ____	or 8×2	= ____
____ times ____	is ____	or 9×2	= ____
____ times ____	is ____	or 10×2	= ____

Jump with Me



Tarru Frog jumps
3 steps each time.

Which numbers will
Tarru touch?

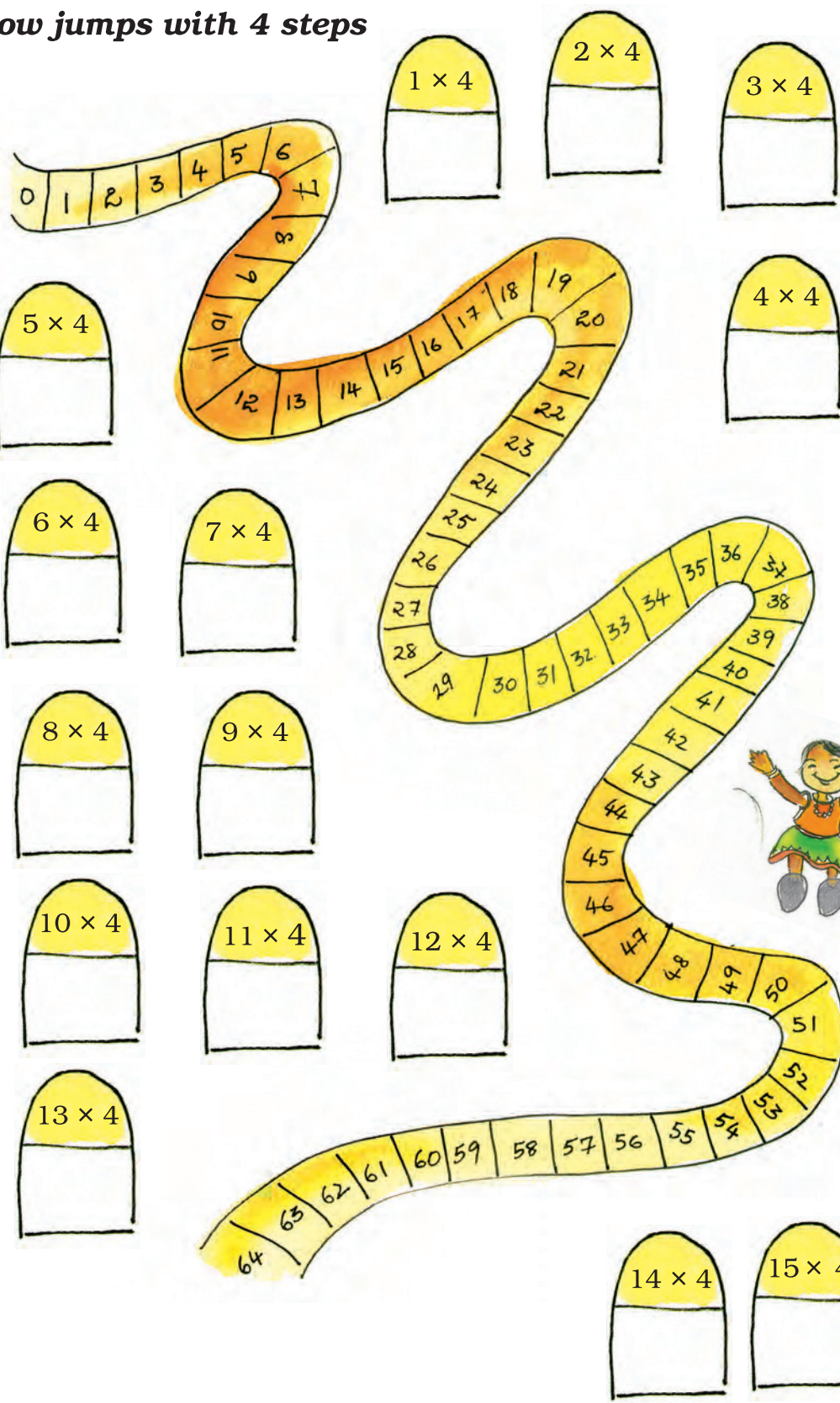
1×3		2×3		3×3		4×3	
5×3		6×3		7×3		8×3	
9×3		10×3		11×3		12×3	
13×3		14×3		15×3			



$2 \times 1 = 2$
 $2 \times 5 = 10$
 $2 \times 10 = 20$



Show jumps with 4 steps

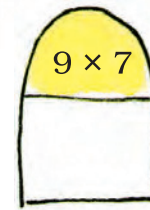
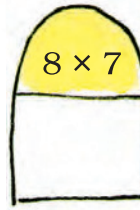
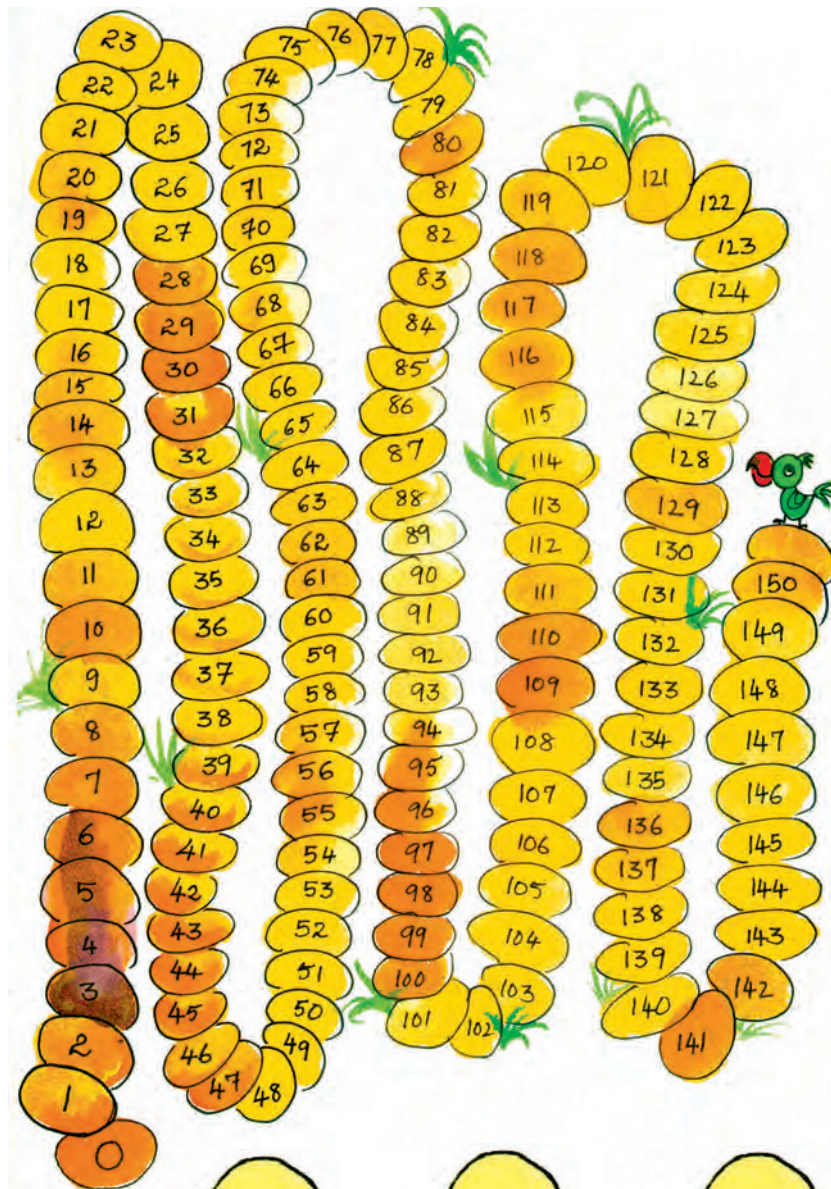
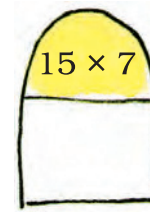
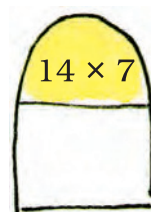
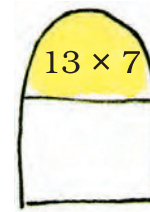
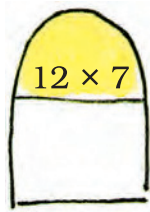
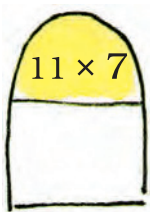
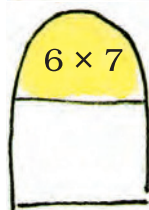
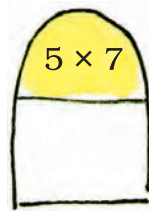
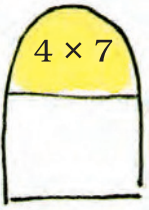
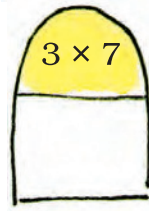
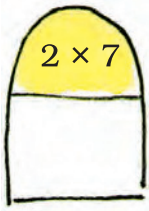
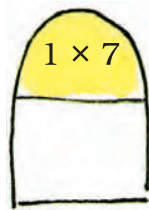




$2 \times 1 = 2$
 $2 \times 5 = 10$
 $2 \times 10 = 20$



Try jumps with seven steps



Stick Play



Renu had some sticks. She arranged them like this:

$$1 \text{ time } 5 = 5$$

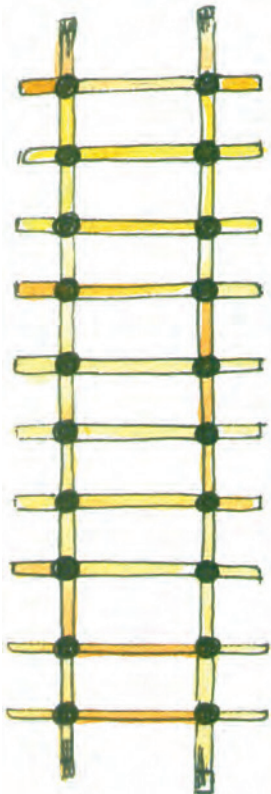
$$2 \text{ times } 5 = 10$$

$$3 \text{ times } 5 = 15$$

$$4 \text{ times } 5 = 20$$

Then she counted how many times the sticks were crossing each other. She found that $4 \text{ times } 5 = 4 \times 5 = 20$

Let's try making a 2 times table with sticks:



$$1 \times 2 = 2$$

$$2 \times 2 = 4$$

$$3 \times 2 = 6$$

$$4 \times 2 =$$

$$5 \times 2 =$$

$$6 \times 2 =$$

$$7 \times 2 =$$

$$8 \times 2 =$$

$$9 \times 2 =$$

$$10 \times 2 =$$



Children can be given 16 and 24 sticks to arrange and encouraged to try different arrangements like 4×4 , 2×8 , 8×2 for 16 sticks and 12×2 , 8×3 , 4×6 , 6×4 , 3×8 , 2×12 for 24 sticks.



Now draw sticks to make the multiplication table of 6:

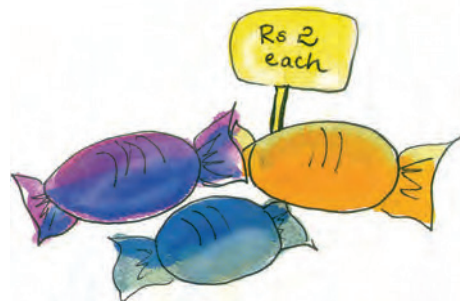


Shopping with Tables

How much do these things cost?

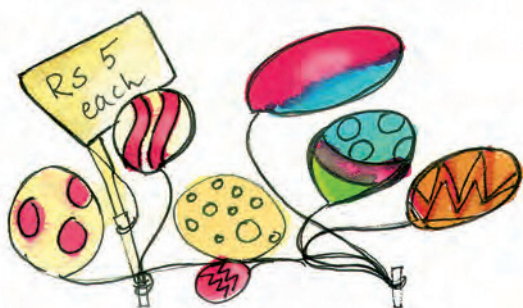
4 toffees cost _____ rupees.

[Hint: 4×2]



3 pencil boxes cost _____ rupees.

10 pencil boxes cost _____ rupees.



9 balloons cost _____ rupees.

5 toys cost _____ rupees.



7 face masks cost _____ rupees.

Practice Time

A. Complete the following:

$2 \times 7 =$ _____	$3 \times 9 =$ _____
$4 \times 9 =$ _____	$5 \times 2 =$ _____
$5 \times 8 =$ _____	$3 \times 10 =$ _____
$10 \times 6 =$ _____	$2 \times 8 =$ _____
$5 \times 9 =$ _____	$10 \times 8 =$ _____

B. Look at the patterns and complete them.

3, 6, 9, _____, _____, _____.

2, 4, 6, _____, _____, _____.

10, 20, 30, _____, _____, _____.

4, 8, 12, _____, _____, _____.

5, 10, 15, _____, _____, _____.

30, 60, 90, _____, _____, _____.





Mathematics for Class 3rd



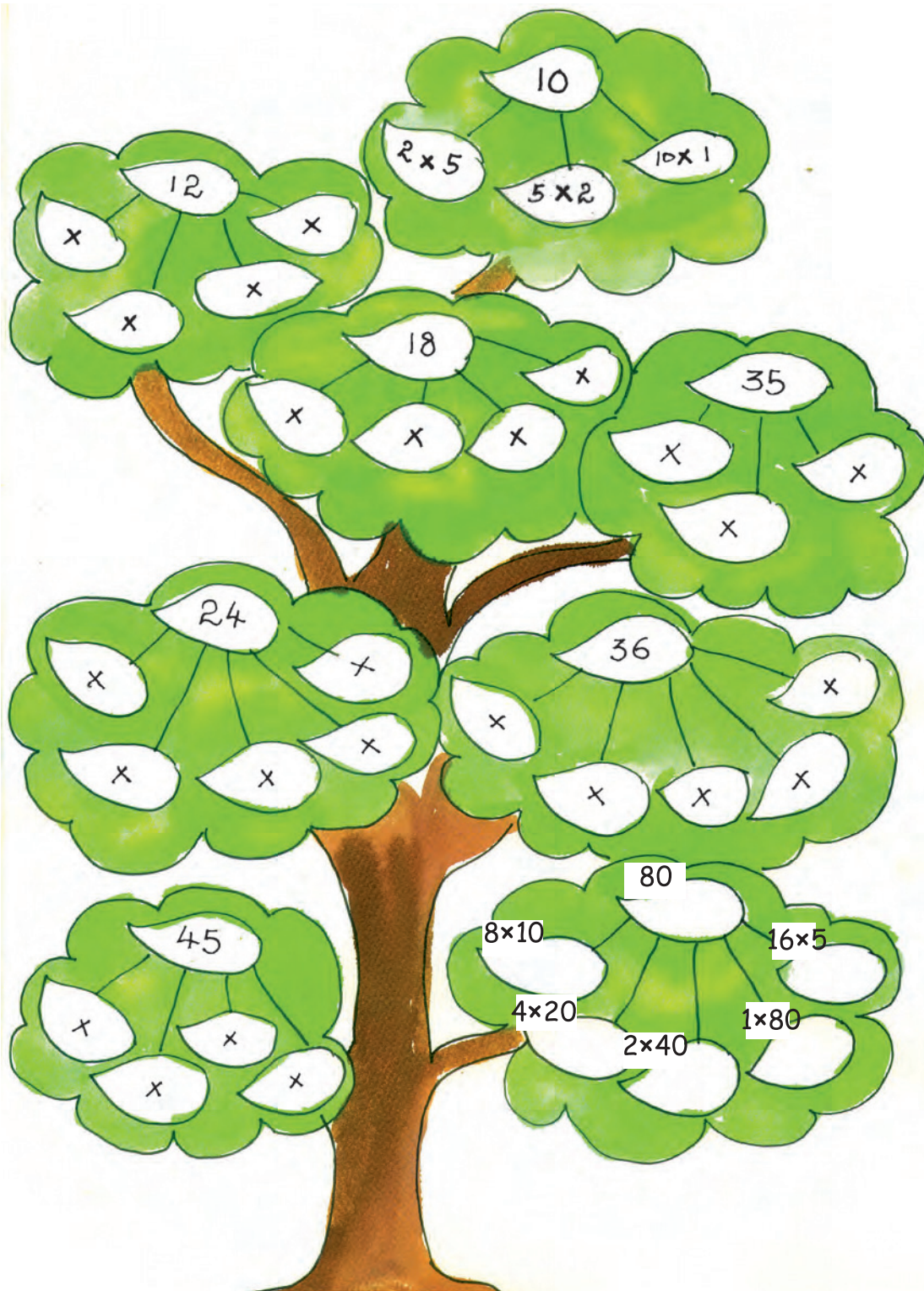
$2 \times 1 = 2$
 $2 \times 5 = 10$
 $2 \times 10 = 20$



Merry Math - III



C. Complete the multiplication tree



D. How many in all?

- * The almirah has 4 shelves.
There are 5 books in each shelf.
How many books are in the almirah?

$$4 \times 5 = 20 \text{ books}$$



- * A shirt has 5 buttons.
How many buttons would 3 shirts have?



- * There are four fans. Each fan has 3 blades. What is the total number of blades in all?

- * A box contains 6 apples. How many apples in all will seven boxes have?



- * How many corners would 4 triangles have?

E. Some multiplication facts:

$$8 \times 3 = \underline{\quad}$$

$$5 \times \underline{\quad} = 35$$

$$3 \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times 6 = 36$$

$$\underline{\quad} \times \underline{\quad} = 42$$

$$10 \times \underline{\quad} = \underline{\quad}$$

$$5 \times \underline{\quad} = 40$$

$$\underline{\quad} \times 9 = 36$$

$$\underline{\quad} \times \underline{\quad} = 54$$

$$\underline{\quad} \times 7 = 28$$

Multiplication Table of 1

one time one is	$1 \times 1 =$	1
two times one is	$2 \times 1 =$	2
three times one is	$3 \times \underline{\quad} =$	$\underline{\quad}$
four times one is	$\underline{\quad} \times \underline{\quad} =$	$\underline{\quad}$
$\underline{\quad}$ times one is	$\underline{\quad} \times \underline{\quad} =$	$\underline{\quad}$
$\underline{\quad}$ times one is	$\underline{\quad} \times \underline{\quad} =$	$\underline{\quad}$
$\underline{\quad}$ times one is	$\underline{\quad} \times \underline{\quad} =$	$\underline{\quad}$
$\underline{\quad}$ times one is	$\underline{\quad} \times \underline{\quad} =$	$\underline{\quad}$



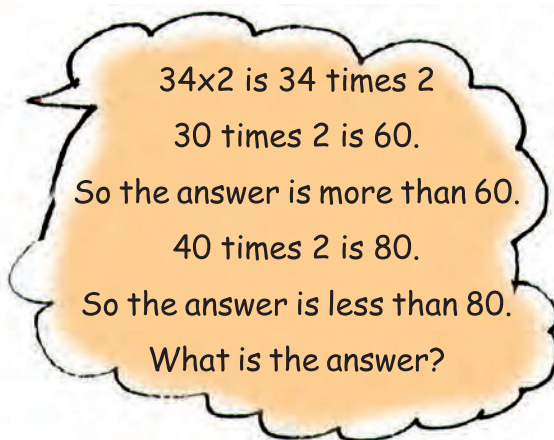
Multiplying Big Numbers

A. Two toffees were given to each student in the class. If there were 34 students, how many toffees were given in all?

Total students present = 34

Each student gets 2 toffees.

So total number of toffees given is 34×2 .



$$\begin{array}{l} 2 \times 1 = 2 \\ 2 \times 5 = 10 \\ 2 \times 10 = 20 \end{array}$$

Merry Math
3rd



How can we
find 34 times
2?

I know!



What's
this?

Vimla wrote

	30	4
2	30	

See, 34 is 30
and 4. Right?



Next Vimla wrote

	30	4
2	2×30 60	2×4 8



30 times 2 is 60
and 4 times 2 is 8.

But what's the
answer?



Just add the numbers in
the boxes, and you get
the answer $60 + 8 = 68$
68 toffees in all.

Wow! That's
smart.



B. In a picnic 4 fruits were given to every student. The number of students was 23. Find out the total number of fruits given.

Number of students in the picnic = 23

Fruits given to each student = 4

Total number of fruits = 23×4



23×4 means 23 times 4
20 times 4 is 80.
So the answer is more than 80.
The answer is also less than 100.
Can you tell why?

Let us try if we can do this by Bharti's method.

	20	3
4	20×4 80	3×4 12

Adding 80 and 12 gives 80

$$\begin{array}{r} 80 \\ + 12 \\ \hline 92 \end{array}$$

So 23 times 4 is 92.



The activities given in this chapter are designed to develop children's conceptual understanding of multiplication. The standard method for multiplying larger numbers may be efficient, but teaching it too early may actually hinder learning. The method given here builds on children's growing sense of two-digit and three-digit numbers. Children should also be encouraged to estimate the result of the operation.

Practice Time

A. Multiply:

$$❖ 22 \times 3 =$$

$$❖ 21 \times 4 =$$

$$❖ 11 \times 5 =$$

$$❖ 20 \times 4 =$$

$$❖ 26 \times 4 =$$

$$❖ 25 \times 3 =$$

$$❖ 35 \times 3 =$$

$$❖ 32 \times 5 =$$

$$❖ 43 \times 2 =$$

$$❖ 24 \times 2 =$$

$$❖ 30 \times 5 =$$

$$❖ 23 \times 9 =$$

$$❖ 38 \times 2 =$$

$$❖ 24 \times 5 =$$

$$❖ 48 \times 4 =$$

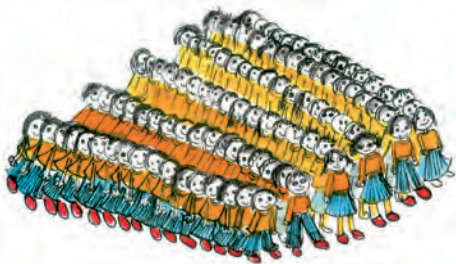
$$❖ 58 \times 2 =$$

B. First guess the answer and then calculate:

- ❖ A flower has five petals. A bunch of flowers has 13 flowers. How many petals are there in the bunch?

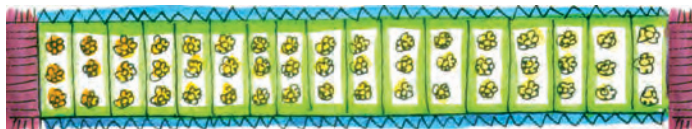


- ❖ A book has 64 pages. What will be the total number of pages in 8 such books?



- ❖ Students stand in rows in the assembly. There are six rows of students. Each row has 17 students. How many students are there?

- ✱ A design has 3 flowers in it. A piece of cloth has 17 such designs. How many flowers will be on the cloth?



How many in 23 dozen?

Many things are sold by the dozen. For example, bangles and bananas are often sold by the dozen.

1 dozen bananas means
12 bananas.

So 23 dozen bananas is
 23×12 bananas.

$$23 \times 10 = 230$$

So the answer is more than 230.



How to find
 23×12 ?

We can do it in
the same way...

23 is 20 and 3. And 12
is 10 and 2.

Bharti wrote



Next Bharti wrote

	20	3
10	20×10 200	3×10 30
2	20×2 40	3×2 6

And Bharti wrote

$$\begin{array}{r} 200 \\ 40 \\ 30 \\ + 6 \\ \hline 276 \end{array}$$

We will add the numbers in the boxes to get the answer.



That's correct.
 $23 \times 12 = 276$



So 23 dozen bananas is 276 bananas.

Now try doing 43×13

43 is 40 and 3

13 is 10 and 3

We write the numbers in the boxes as shown.



Guess the answer first.

	40	3
10	40×10 400	3×10 30
3	40×3 120	3×3 9

Add the numbers in the boxes:

$$\begin{array}{r} 400 \\ 120 \\ 30 \\ + 9 \\ \hline 559 \end{array}$$



So $43 \times 13 = 559$

Practice Time

First guess the answer and then check it by calculating :

$42 \times 23 = \underline{\hspace{2cm}}$

$73 \times 11 = \underline{\hspace{2cm}}$

$51 \times 13 = \underline{\hspace{2cm}}$

$54 \times 12 = \underline{\hspace{2cm}}$

$25 \times 36 = \underline{\hspace{2cm}}$

$12 \times 14 = \underline{\hspace{2cm}}$

Multiplication Patterns

A. $9 \times 1 = 9$

$9 \times 2 = 18$

$9 \times 3 = 27$

$9 \times 4 = 36$

$9 \times 5 = 45$

$9 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

$9 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

$9 \times 8 = \underline{\hspace{1cm}}$

$1 + 8 = 9$

$2 + 7 = 9$

$3 + 6 = 9$

$4 + 5 = 9$

$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

Did you see the pattern in the 9 times table? What numbers are adding up to 9?

Observing patterns in multiplication tables deepens the understanding of the number system.

B. Complete the grid by multiplying the numbers

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4										
5										
6										
7										
8										
9										
10										

Look at the cross in your grid.

		3	
4	6	8	
	9		

Add the numbers together from top to bottom.

$$3 + 6 + 9 = 18$$

Add the numbers together from left to right.

$$4 + 6 + 8 = 18$$

The total is the same.

Look for other such crosses and copy them in your notebook.



$$\begin{array}{l} 2 \times 1 = 2 \\ 2 \times 5 = 10 \\ 2 \times 10 = 20 \end{array}$$



C. ✱ Mark the numbers 1–10 in the same grid in one colour.

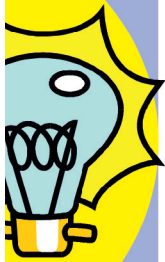
✱ Mark the numbers 12–20 in another colour.

✱ Similarly mark 21–30 in a third colour.

Do you see any colour pattern?



Fill this space with your
favourite multiplication
table.



51
1
50
90

10

Play with Patterns



Patterns Around Us

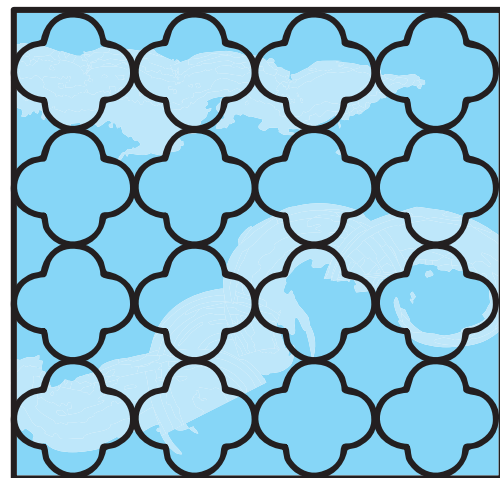
In everyday life, we see many patterns.

For example, we see:

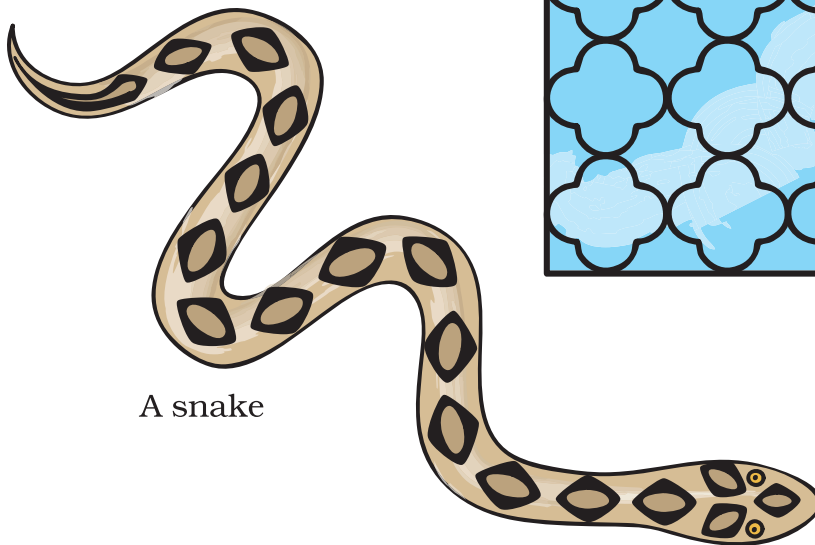
Barbed wire



Grills of a window



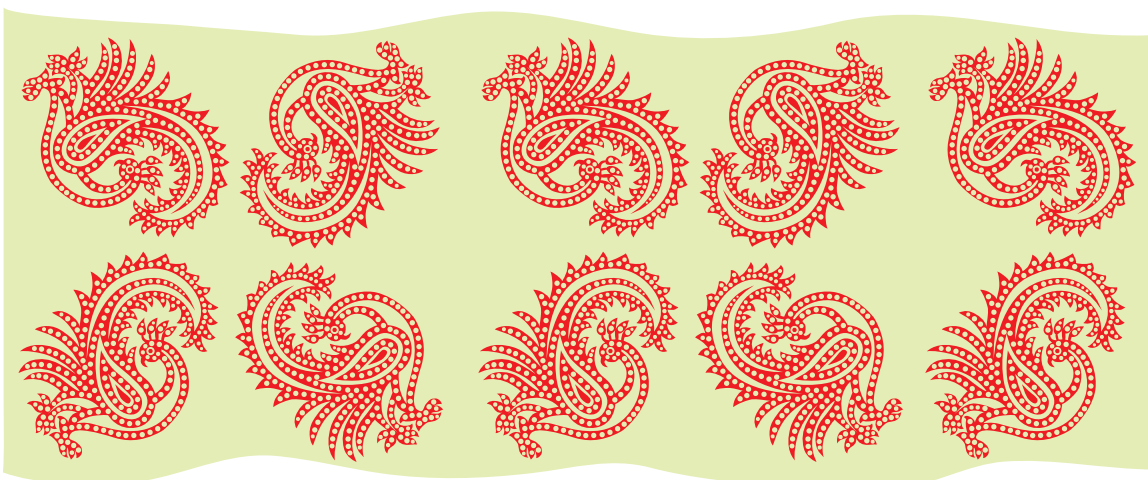
A snake



Look around you and list three things in which you find some pattern. _____

Draw some patterns which you have found around yourself.

Hello! I am Pallavi. I live in Jaipur. My city is known for clothes with block prints. Have a look at some of the block print designs made by my mother.



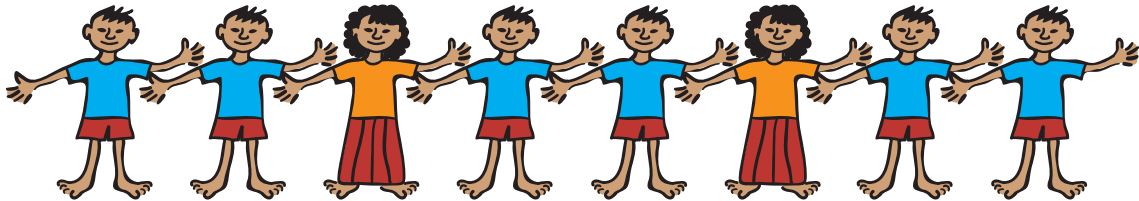
She makes these designs by using blocks again and again. One day I got hold of the blocks and made a beautiful design.



You will see that these designs have been made by using the same block in different ways.
Can you see a pattern in the way each block is repeated?

Pictures in a Pattern

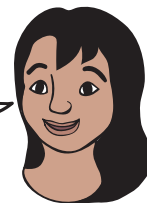
I have made some patterns of pictures. I have used a rule for each pattern.



The rule for this pattern is There is one girl after every 2 boys. Then this is repeated.



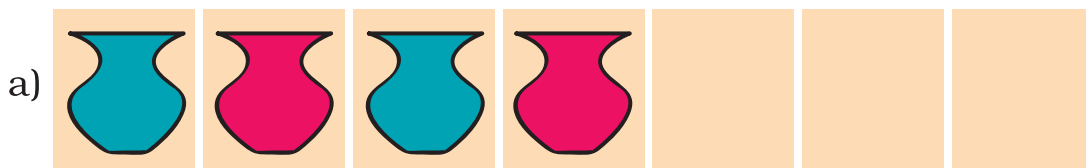
In this pattern there is one arrow up and one down. Then this is repeated.

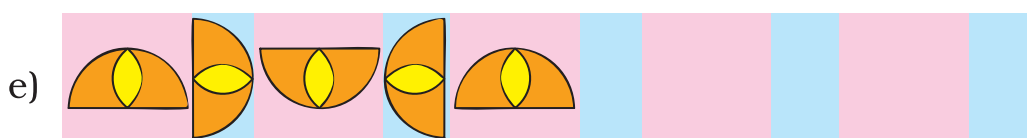
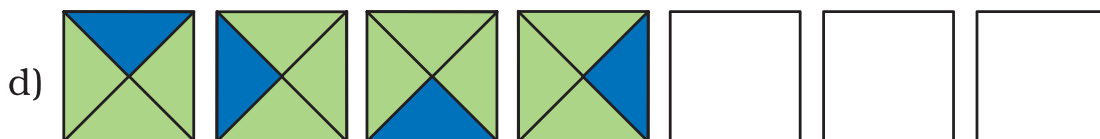
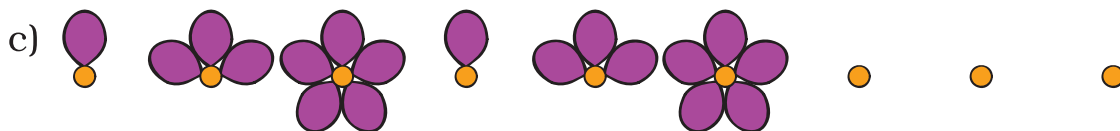


Practice Time

◆ Given below are some patterns.

Figure out the rule for each and continue the pattern.

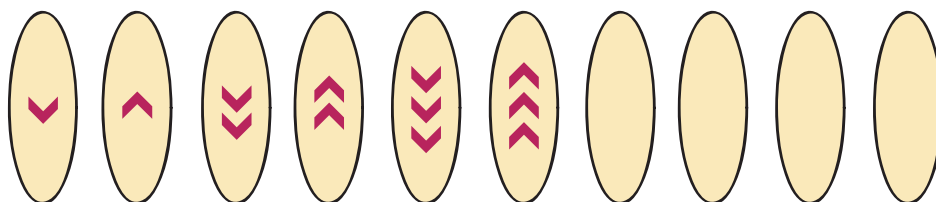




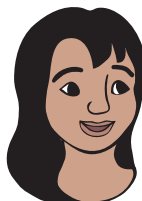
f) Morning, afternoon, evening, night, morning, _____

Growing Patterns

I have made a new pattern.



So what? It does have a rule.



But this pattern keeps on growing. It does not repeat.



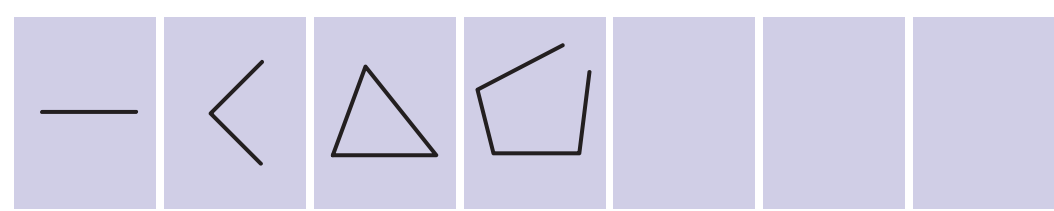
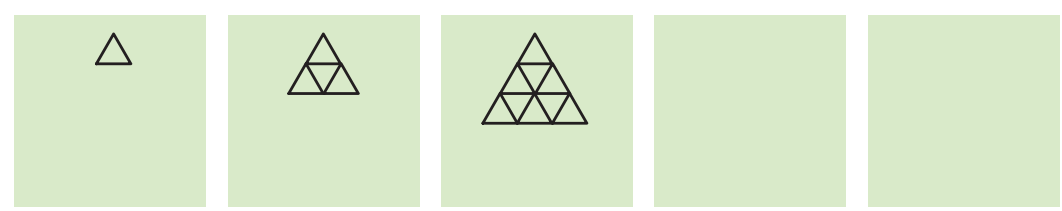
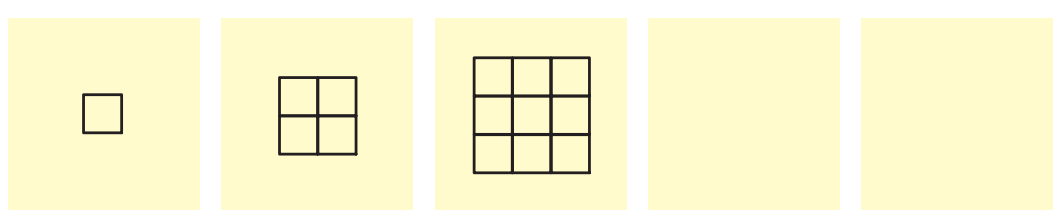
Can you see the rule and continue the pattern?



$2 \times 1 = 2$
 $2 \times 5 = 10$
 $2 \times 10 = 20$



Try these also.

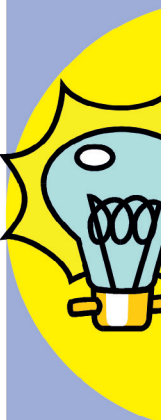


My Own Patterns

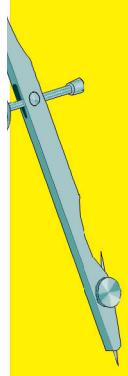
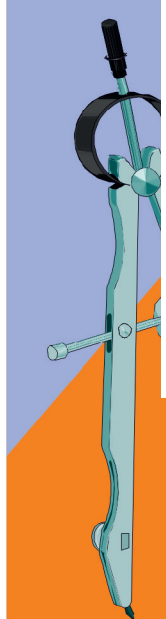
◆ Here is your space to make your own patterns:

- i)
- ii)
- iii)
- iv)

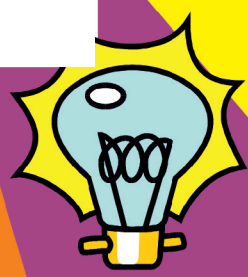
◆ Ask your friends to continue the patterns made by you.



% 1
X 1
= 50
+ 9



$\frac{21}{2} \div 5$
 $1 = \frac{21}{2} \div 21$



Number Patterns

We have made some patterns with pictures. We can make patterns with numbers too. Like 21, 41, 61, 81, 101,

You know the next number, don't you?

This is a growing pattern. It can go on and on.

21, 41, 61, 81, 101, 121, 141, 161,

A. Look for the rules and continue these growing patterns:

- 51, 56, 61, 66, _____, _____
- 7, _____, 21, 28, 35, _____, _____
- 2, 4, 8, 16, 32, _____, _____, _____
- 12A, 13B, 14C, _____, _____.

B. Look at these growing patterns. Find out what to add to each number to get the next one:

- 1, 3, 6, 10, _____, _____, _____, _____, _____
- 0, 2, 6, 12, _____, _____, _____, _____, _____
- 1, 3, 7, 13, _____, _____, _____, _____, _____
- 2, 3, 6, 11, 18, _____, _____, _____, _____, _____

This chapter helps children observe and understand patterns around them. They can be given more examples of repeating or growing patterns to recognise the motif or basic unit which generates the patterns. Making secret messages or codes also helps pattern recognition. As their algebraic thinking develops, they will realise that the pattern created by the rule **boy boy girl** is the same as **A A B** or $\uparrow\uparrow\downarrow$. Some interesting and important number patterns that relate to mathematical operations are given.

Secret Messages

Amrita and Paritosh are writing secret messages.

3W3H3E3R3E
3A3R3E 3Y3O3U



3I3N 3T3H3E
3C3A3N3T3E3E3N



Can you tell what they are trying to say?

These are two secret messages. Look for the patterns and find the hidden sentences.

1 I 2 L 3 O 4 V 5 E 6 Y 7 O 8 U

ATBHCIDS EBFOGOHK I IJS KFLUMN

Now you also make your own secret messages.

Even and Odd Number Patterns

91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

Half these numbers are in yellow. What patterns do you see in these numbers? Continue the same pattern and fill in the blanks:

96, 98, _____, 102, _____, _____, _____, _____

How far can you continue this pattern?

These numbers have a special name. They are called **even** numbers.

Do any of these even numbers end with 3 or 5?

What do even numbers end with?

Look at the pattern of numbers in blue. Continue the pattern and fill in the blanks:

99, 101, _____, 105, 107, _____, _____, _____

What do the numbers in blue end with?

All numbers that end with 1, 3, 5, 7 or 9 are called **odd** numbers.

Write all odd numbers between 400 and 410.

Write all even numbers between 155 and 165.

If we add 1 to any odd number we get an _____ (even/odd) number.

If we add 1 to any even number we get an _____ (even/odd) number.

What do you get if you add an even number to an odd number?

Names in an Order

Adil has to arrange this list so that the names starting with A come first and then come those with B, C, D and so on. Number these names in the order in which they will come.

Sharada		Mahadevan		Tsering		Adil			
Gurinder		Baichung		Harsha		Raja			
Narayan		Kavita		Warsha		Elvis		Jalaj	

Jalaj is proud to have a special name. He says if you read it backwards it is still the same.

Which of the following names have the same pattern? Mark ✓.

Harsh, Anna, Kanak, Munna, Ongbi

Some others like _____, _____, _____ ask for more than one glass.

Now the trouble begins !!!

There are some big guests who go on gulping down glass after glass...!

Bunny wants to guess who drank how much.

Help him fill the table. Have fun!



Drank how much	Name of guest
Less than 1 glass	_____, _____
Between 1-5 glasses	_____, _____
Between 5-10 glasses	_____, _____
More than 10 glasses	_____, _____

Water In, Water Out?

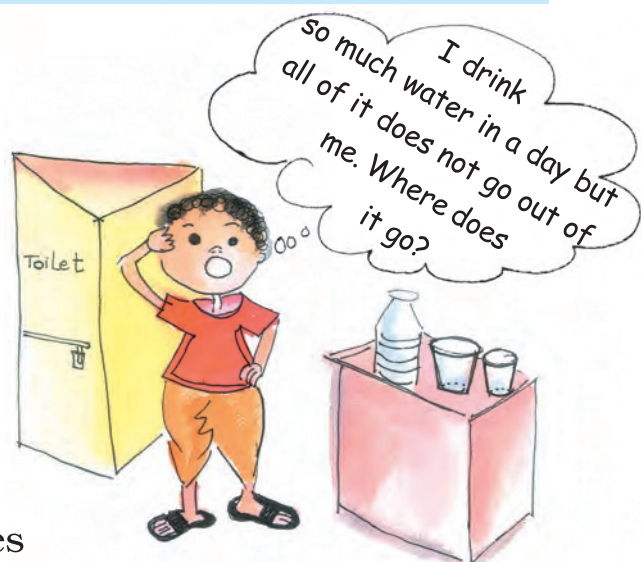
Have you ever thought like Laddu?

About how many glasses of water do you drink in a day?

Summer day : _____ glasses

Winter day : _____ glasses

Can you guess how much water goes out of you?





Bottles and Buckets

Get a 1 litre bottle (can be an empty bottle of water, oil etc.). Now collect some bottles and a mug, jug, glass, bowl, etc. at your house. Use the 1 litre bottle to check which of these holds more than 1 litre and which one holds less than 1 litre. Make a small drawing if you like.



Less than 1 litre	More than 1 litre
bowl 	big cooking pot 



- Now look at the buckets in your house.
- Guess how many litres of water they can hold.
- Use a 1 litre bottle and check if your guess is right for all the buckets.

Bucket	My guess	My measure
Bucket 1		
Bucket 2		
Bucket 3		

Match the Right Pairs

Come on, guess!

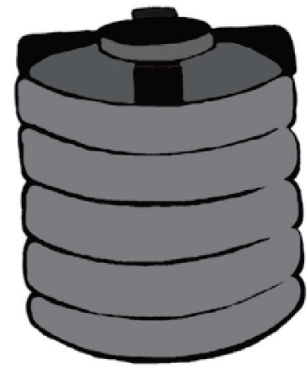


About 12 litres



(to measure milk)

Less than $\frac{1}{2}$ litre



(water tank)

About 5 litres



(bucket)

1000 litres



(eye drops bottle)

$\frac{1}{2}$ litre



(water suraahi)

Whose Jug Holds More?

What are Naima and Jeetu doing?

If Naima pours one glass of water in her jug, it looks like this:



Naima thinks she will have to pour around 3 glasses of water to fill the jug. What do you think? _____

If Jeetu pours one glass of water in his jug, it looks like this:



- ♥ Whose jug holds more water? _____
- ♥ How many glasses of water do you think Jeetu should pour to fill his jug? _____
- ♥ If Jeetu pours one more glass of water his jug will be around _____ full.

Filling Pots

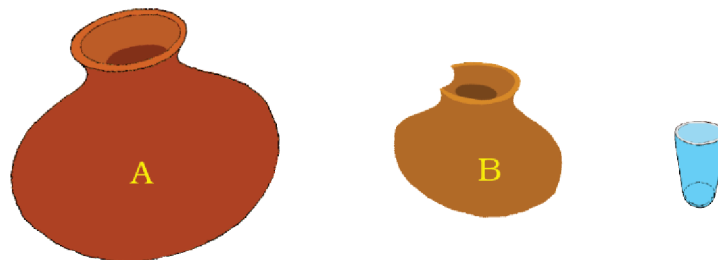
Naseem and Abdul had to fill their pots each with water. Both pots were equally big and heavy. So they went to the tap again and again, filled their own bottles and poured water into the pots.



Naseem had to fill her bottle 16 times from the tap. But Abdul had to fill his bottle only 8 times.

- * Why did Naseem go more times than Abdul?
- * Naseem's bottle can hold _____ (twice/half/three times) as much water as Abdul's bottle.

How Many Glasses?



Pot B holds 11 glassfuls of water. Pot A holds twice as much water as pot B. How many glasses of water are needed to fill pot A? _____

In class, children need to speak about their own daily experiences of measuring liquids and comparing the sizes of different containers. They must get many opportunities to use words like 'glassful', 'bucketful' etc. They will also get familiar with ideas such as 'half', 'twice', 'four times' the amount of water, and a sense of roughly how much one litre is.

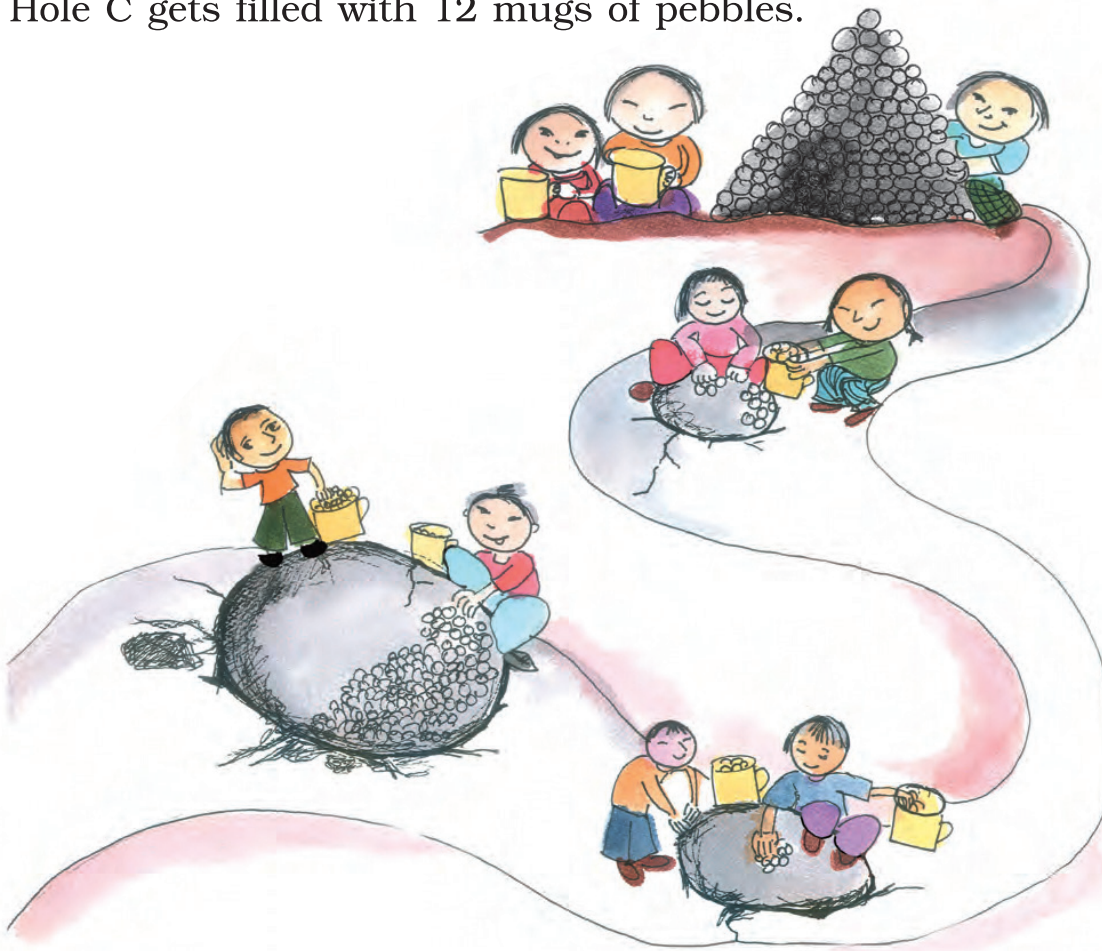
Filling Potholes

This is a small town near Kohima. There are some potholes in the road. Before the rains come, children want to fill the holes with pebbles. They bring pebbles in mugs of the same size.

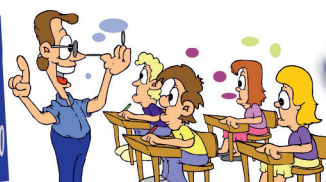
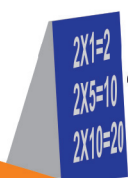
Hole A gets filled with 9 mugs of pebbles.

Hole B gets filled with 18 mugs of pebbles.

Hole C gets filled with 12 mugs of pebbles.

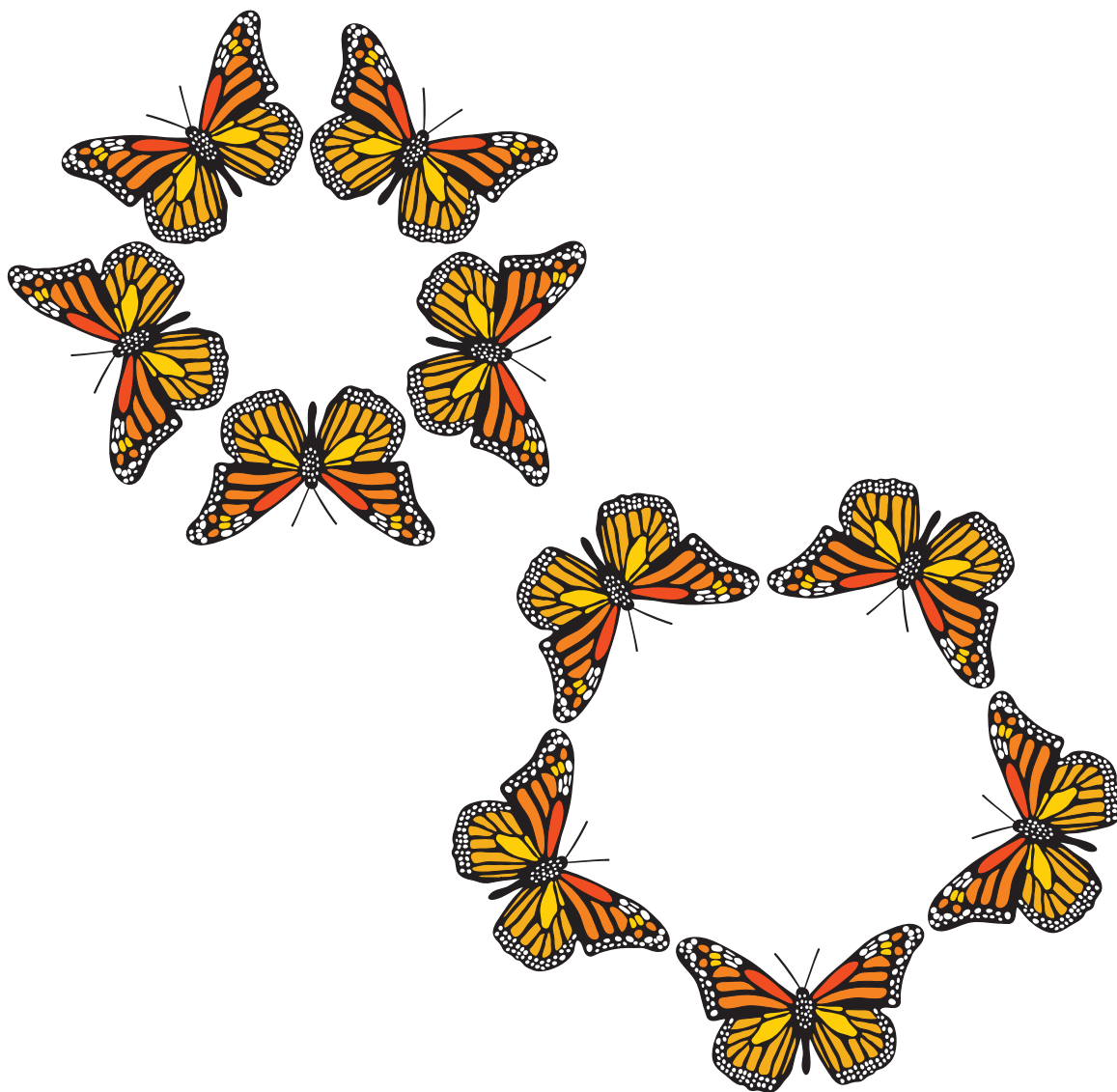


- ♥ Mark A, B, C on the right hole in the picture.
- ♥ Which is the biggest pothole? _____
- ♥ If jugs are used, hole A gets filled with 5 jugs. How many jugs of pebbles are needed to fill hole B? _____



12

Can we Share ?

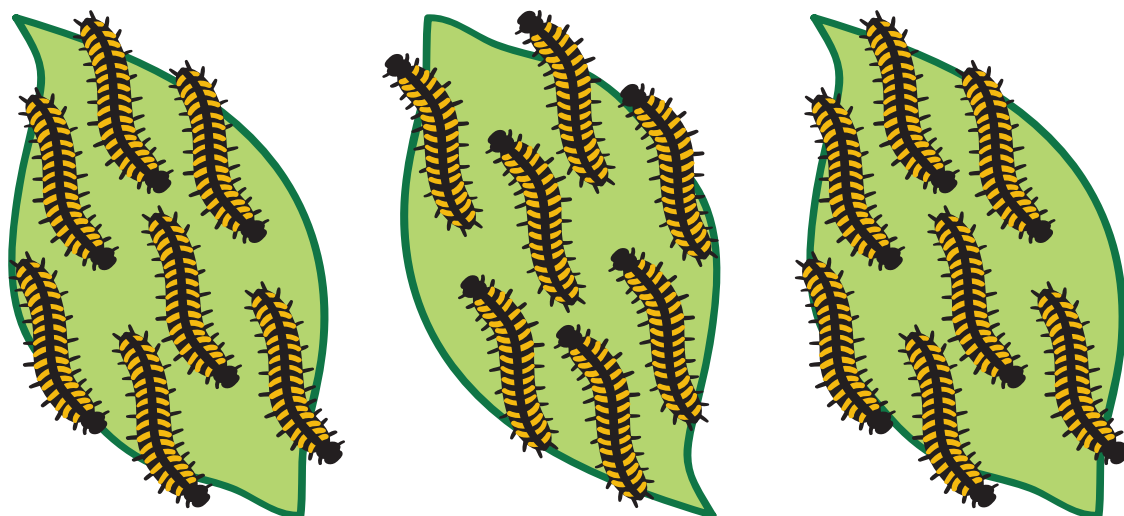


How Many in Each Group?

There are 10 butterflies.

They are in 2 groups.

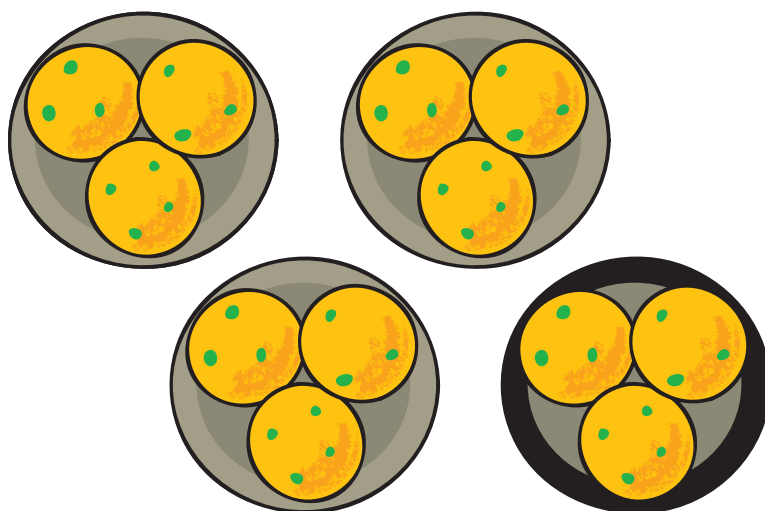
There are 5 butterflies in each group.



There are _____ caterpillars.

They are in _____ groups.

There are _____ caterpillars in each group.



There are _____ laddoos.

They are in _____ groups.

There are _____ laddoos in each group.

Draw 18 stars.

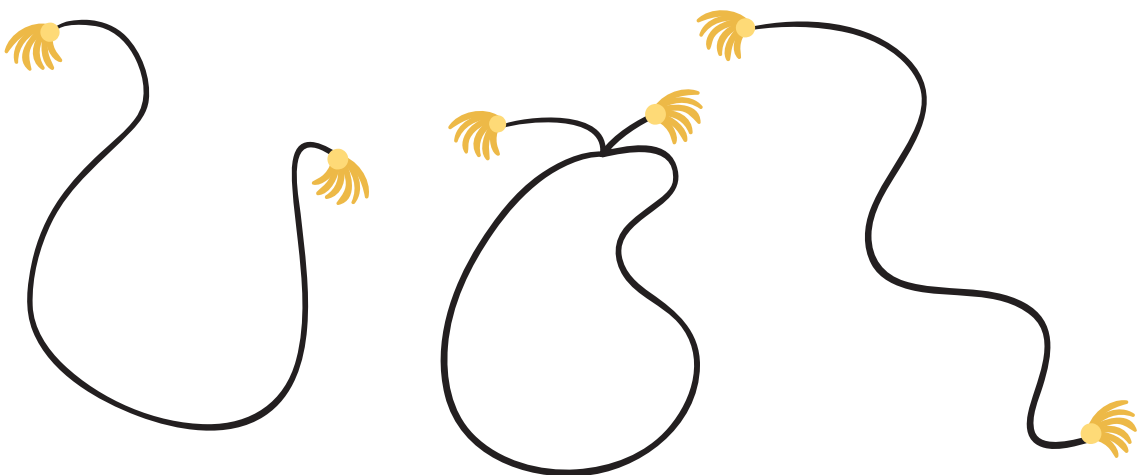
Put them into 2 equal groups.



There are _____ stars in each group.

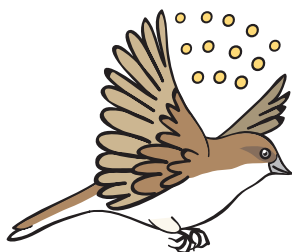
Draw 18 beads.

Put them into 3 equal groups.



There are _____ beads in each group.

Share the Grains



Mummy bird brings 12 grains.

How to distribute equally?

Mummy bird starts by giving 1 grain to each baby.



Then Mummy bird gives one more grain to each baby.



Each baby has got 2 grains now. How many grains are left?_____

She puts one more grain in each baby's mouth.

All the grains are finished.



12 grains have been **divided** among 4 baby birds.

Each baby has got 3 grains.

$$12 \div 4 = 3$$

Try These Now.....

- ◆ Gopu has 3 plates of *jalebis*.

Each plate has a different number of *jalebis*.

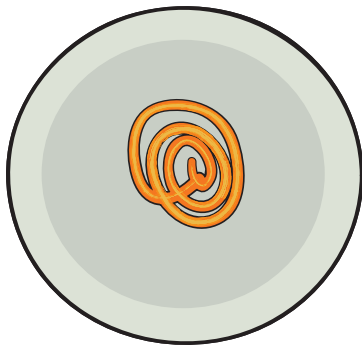


Plate A

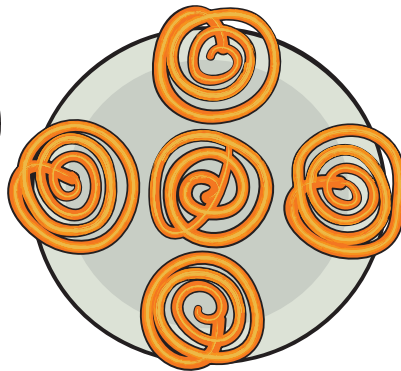


Plate B

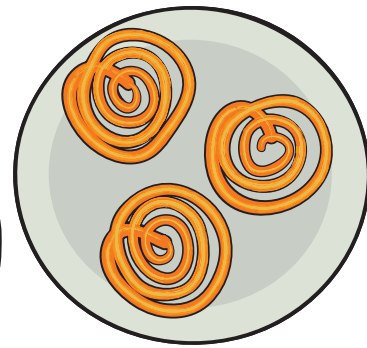


Plate C

Now draw the *jalebis* on the plates below, so that each plate has the same number of *jalebis*.

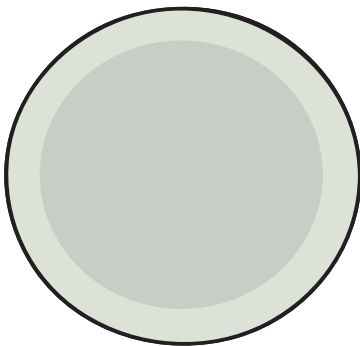


Plate A

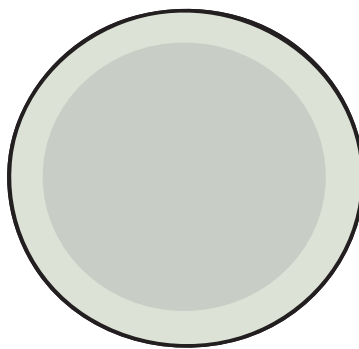


Plate B

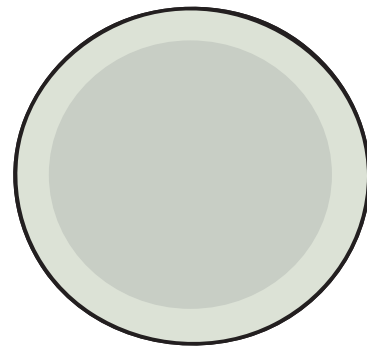


Plate C

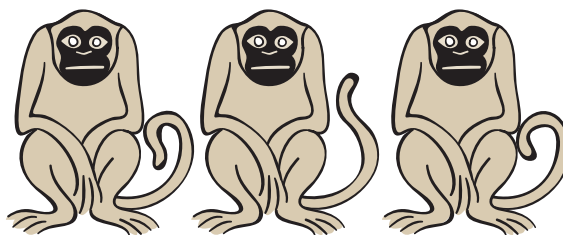
How many *jalebis* are there altogether? _____

How many *jalebis* are there in each plate? _____

Discuss in the class how you found the answer.

Sharing them Equally

◆ Here are six bananas.



Here are three monkeys.

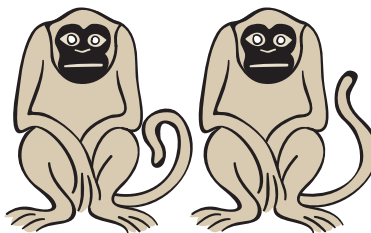
If they share the bananas equally, each monkey will get two bananas.

6 bananas divided into 3 equal parts = 2 bananas each

$$6 \div 3 = 2$$



If there are six bananas



and two monkeys,

each monkey will get three bananas.

Six bananas $\div$ 2 = 3 bananas each

$$6 \div 2 = 3$$



Give children the experience of sharing things equally and writing corresponding division statements.

If there are 60 bananas and two monkeys, how many will each monkey get?
_____ bananas.



What if there are 600 bananas and two monkeys?

- ◆ Five friends found 10 five-rupee coins on the ground.

They shared them equally.

Each friend got ten rupees.

$$50 \div 5 = 10$$

If there are 16 ten-rupee notes and four friends to share, then

$$16 \div 4 = \text{_____} \quad \text{and} \quad 4 \times 10 = 40$$

so each friend gets _____ rupees.

Five friends found Rs 100. If they share it equally, how much will each get? _____



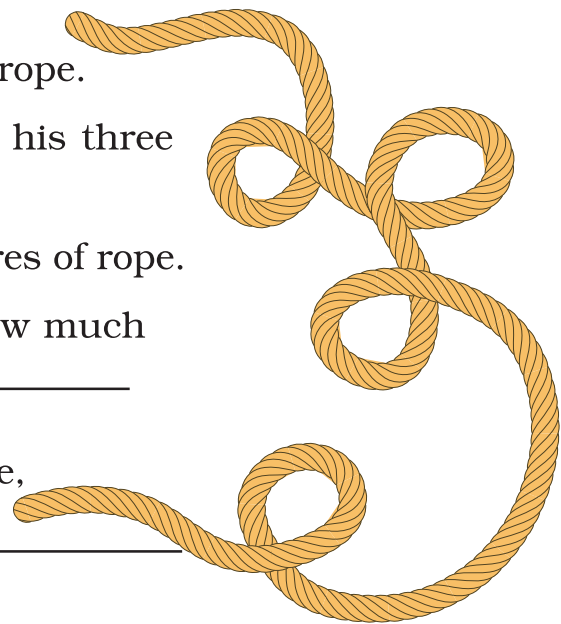
- ◆ Hari Prashad has 30 metres of rope.

He distributes it equally among his three children.

Each child gets _____ metres of rope.

If there is 36 metres of rope, how much of rope will each child get? _____

And if there is 60 metres of rope, how much will each child get? _____



How Many Shelves?

I have 20 books. I can keep 5 books in one shelf, so how many shelves do I need in my almirah?

Five books in the first shelf.

15 books are left.

5 more books in the second shelf.

10 books are left.

5 more books in the third shelf.

5 books are left.

5 more books in the fourth shelf.

20 books have filled up 4 shelves of the almirah.

20 books put into equal groups of 5 each take 4 shelves.



On this and the following page, division is done by making equal groups. For instance, here equal groups of 5 books each have been made. This process is different from sharing them equally (by distributing them into 4 shelves).

◆ Now let us try this.

Here are 28 buttons.



A tailor puts 4 buttons on one shirt.

So now there are 7 shirts with buttons.



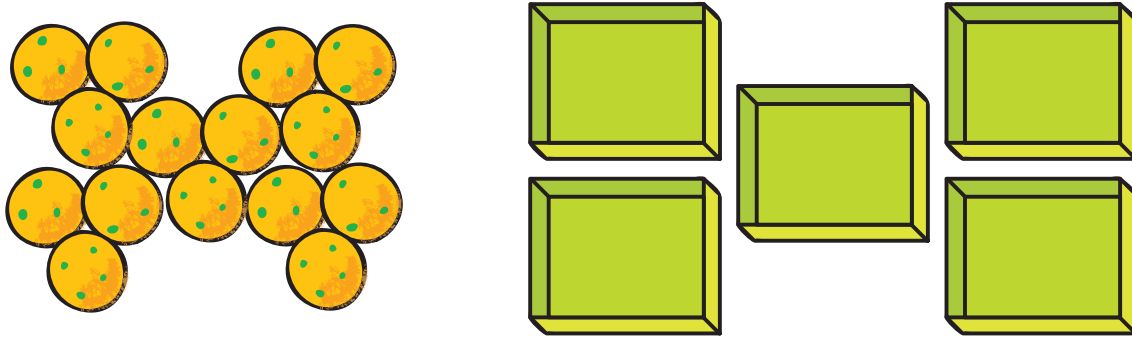
$$28 \div 4 = 7$$

If there are 28 buttons, and the tailor puts 7 buttons on each shirt, there will be _____ shirts with buttons.

$$28 \div 7 = \underline{\hspace{2cm}}$$

Practice Time

1. Minku puts her 15 laddoos equally into 5 boxes.



(i) How many laddoos will there be in each box?

There will be _____ laddoos in each box.

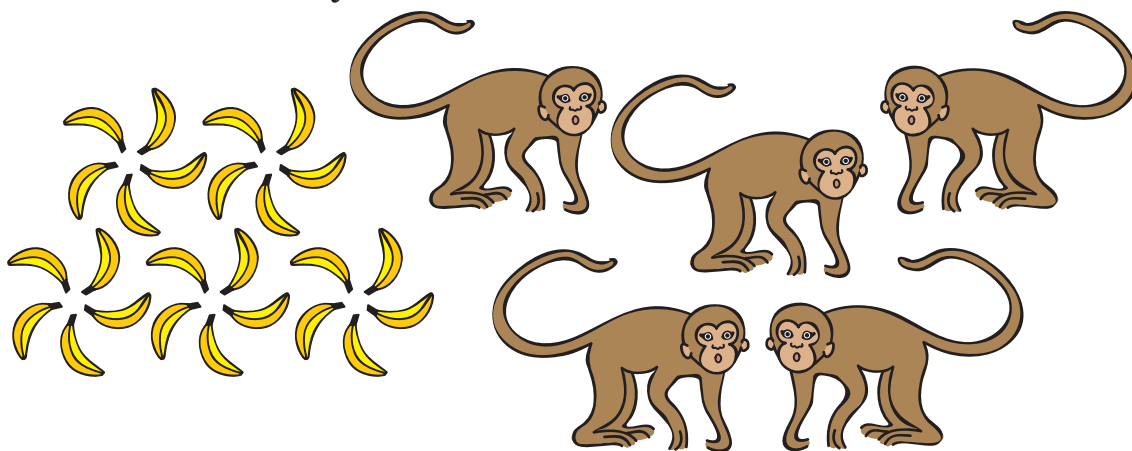
$$15 \div 5 = \underline{\quad}$$

(ii) If she uses only 3 boxes, how many laddoos will there be in each box?

There will be _____ laddoos in each box.

$$\underline{\quad} \div 3 = \underline{\quad}$$

2. Share 25 bananas among 5 monkeys. How many bananas for each monkey?



$$\underline{\quad} \div 5 = \underline{\quad}$$

Each monkey has _____ bananas.

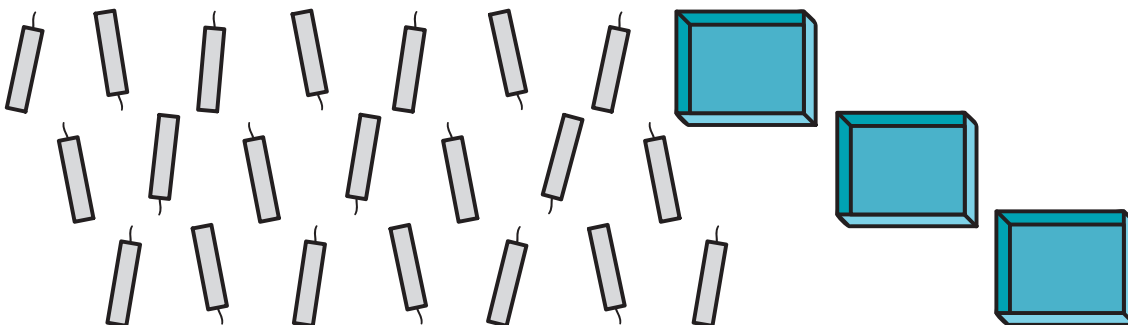
3. Share 12 balloons among 3 boys. How many balloons for each boy?



$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Each boy has _____ balloons.

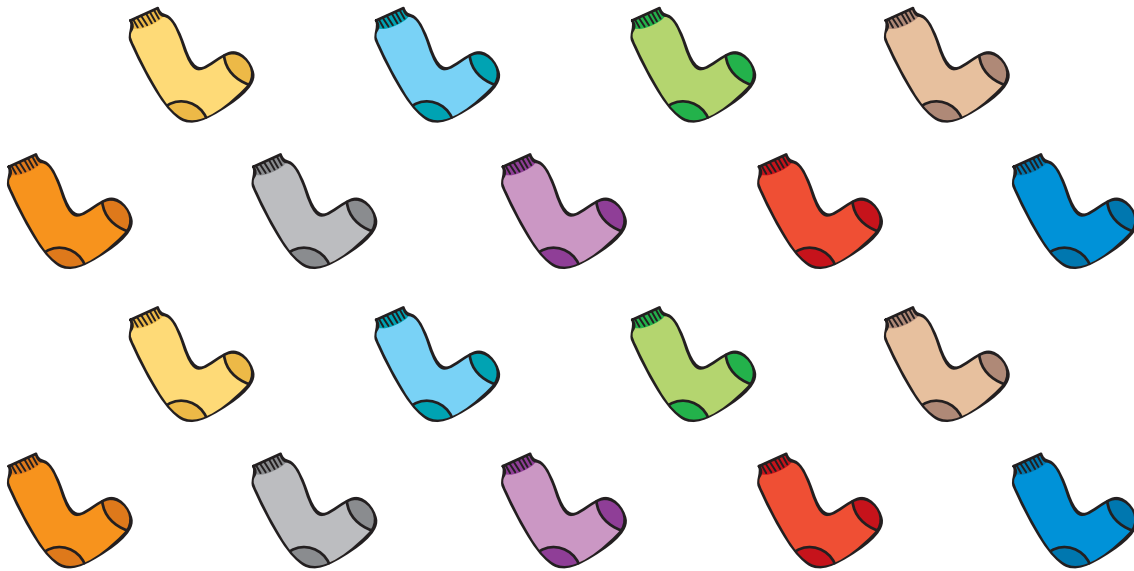
4. There are 21 candles. Put them equally in 3 boxes. How many candles are there in each box?



$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

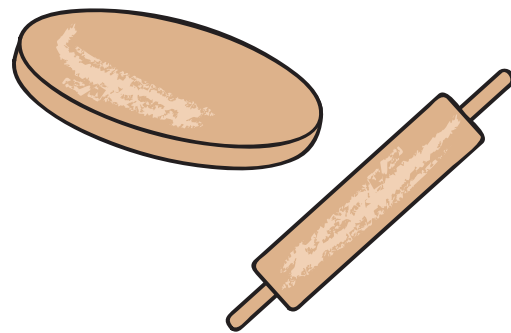
5. There are 18 socks.

How many girls can wear these socks?



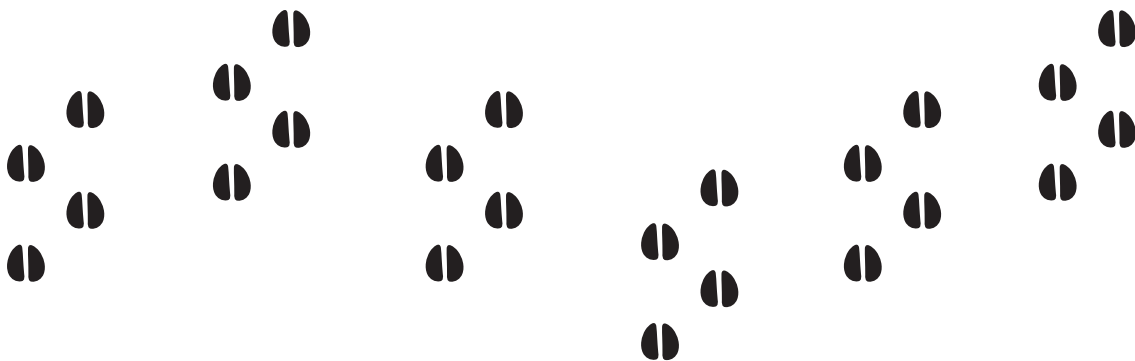
6. Raj has 36 minutes to make rotis. One roti takes 3 minutes. How many rotis can he make in this time?

He can make _____ rotis.

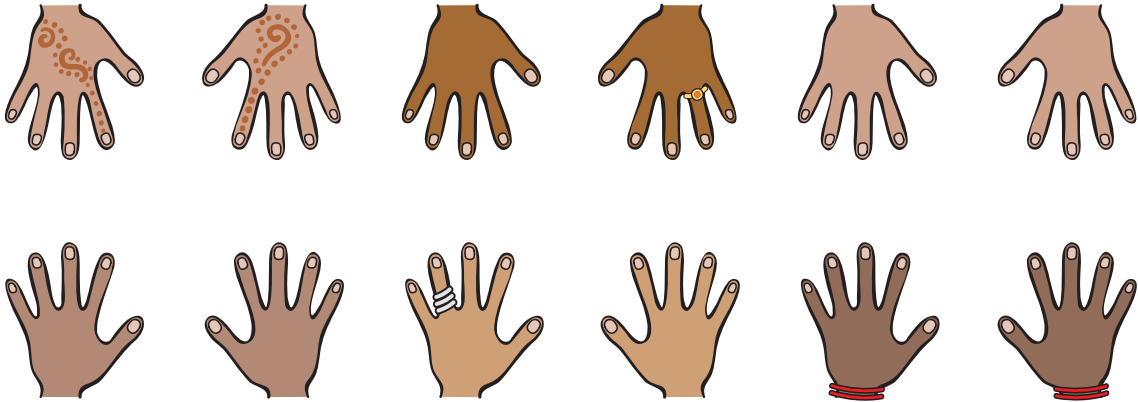


7. These are 24 footmarks of goats.

So how many goats were there?



8. Some girls are playing a game with both their hands.
The girls who are playing have 60 fingers altogether.
How many girls are playing this game?



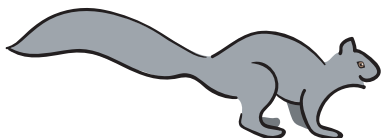
9. Lakshmi has 27 kg potatoes to sell.
Three men came and bought equal amounts of potatoes.
Each man bought _____ kg of potatoes.



Jumpy Animals



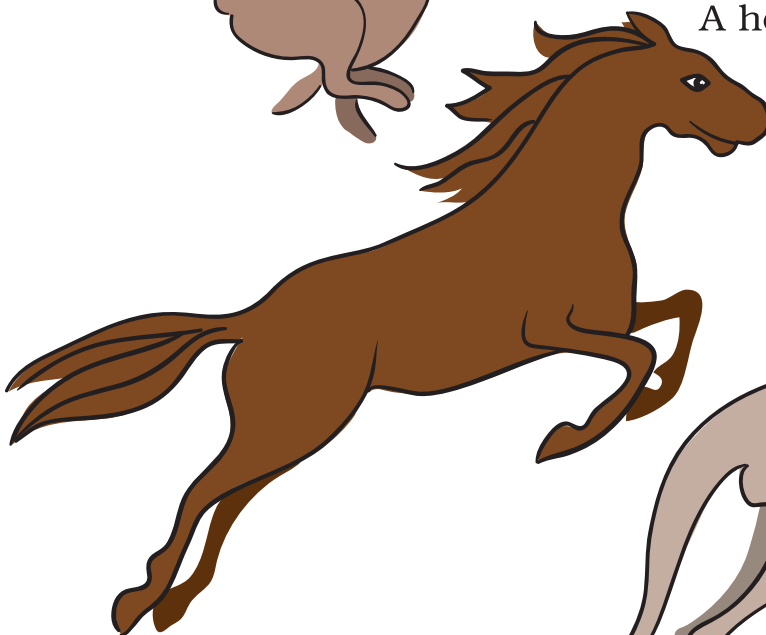
A frog jumps 2 steps at a time.



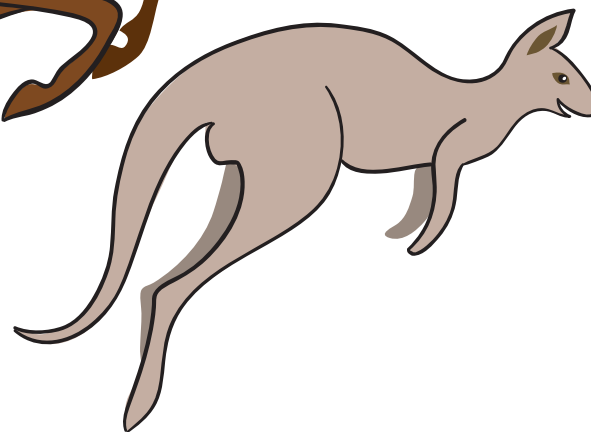
A squirrel jumps 3 steps.



A rabbit jumps 5 steps.



A horse jumps 15 steps.



A kangaroo jumps 30 steps.

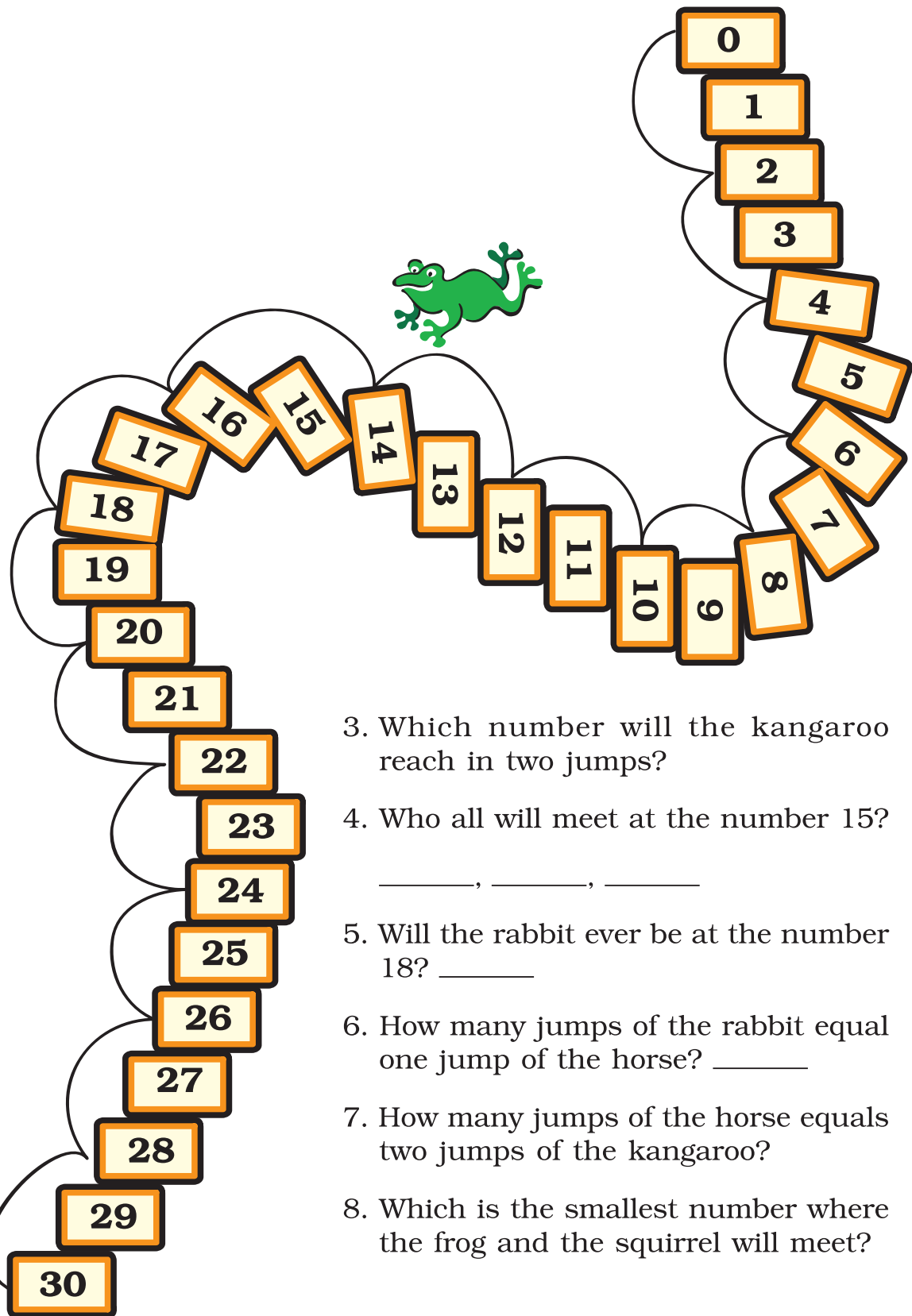
Use the path on the next page to find out:

1. In how many jumps will the frog reach 30?

$$30 \div 2 = \underline{\hspace{2cm}}$$

2. In how many jumps will the squirrel reach 27?

$$27 \div 3 = \underline{\hspace{2cm}}$$



3. Which number will the kangaroo reach in two jumps?
4. Who all will meet at the number 15?
_____, _____, _____
5. Will the rabbit ever be at the number 18? _____
6. How many jumps of the rabbit equal one jump of the horse? _____
7. How many jumps of the horse equals two jumps of the kangaroo?
8. Which is the smallest number where the frog and the squirrel will meet?

How Quick Are You?

- ◆ Divide into groups of 2 using 2 times table.

$18 \div 2 =$	9	Hint: $2 \times 9 = 18$
$18 \div 9 =$	2	
$16 \div 2 =$		
$20 \div 2 =$		
$\div 2 =$	7	
$\div 2 =$	10	
$8 \div$	4	
$\div 2 =$	5	

- ◆ Divide into groups of 5 using 5 times table.

$10 \div 5 =$		Hint: $5 \times 2 = ?$
$20 \div$	4	
$15 \div 5 =$		
$40 \div$	8	
$20 \div 5 =$		
$\div 5 =$	6	
$25 \div 5 =$		
$\div 5 =$	3	
$35 \div 5 =$		
$\div 5 =$	2	

- ◆ Divide into groups of 10 using 10 times table.

$20 \div 10 =$		
$30 \div 10 =$		
$40 \div 10 =$		
$50 \div 10 =$		
$40 \div$	4	
$\div 10 =$	8	
$\div 10 =$	5	
$\div 10 =$	3	
$\div 10 =$	2	
$60 \div$	6	

Encourage children to explore the use of multiplication facts for division through mental computation.

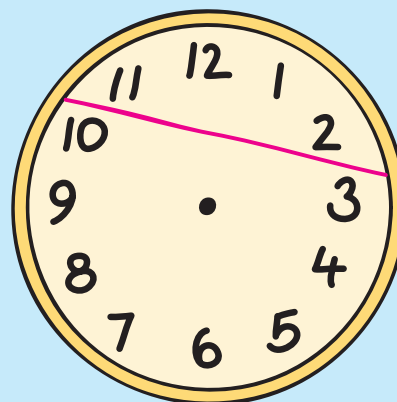
◆ Try these.

4 ÷	=	2	
14 ÷ 7 =			
6 ÷ 3 =			
÷ 2 =	7		
÷ 2 =	3		
15 ÷ 3 =			
8 ÷ 4 =			
15 ÷ 5 =			
8 ÷	=	4	
÷ 2 =	8		

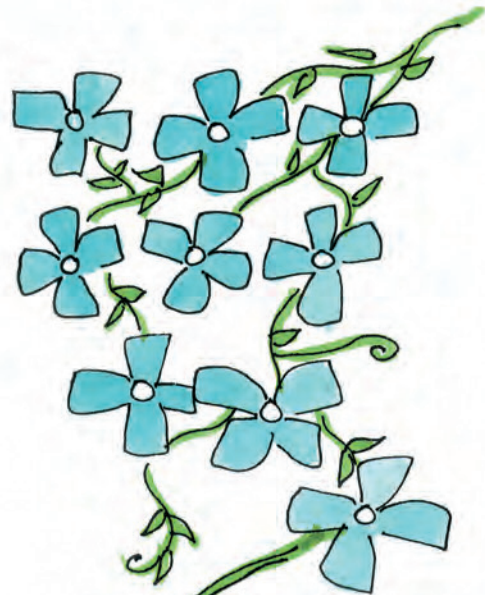
9 ÷ 3 =			
18 ÷ 9 =			
÷ 2 =	5		
20 ÷ 5 =			
12 ÷ 4 =			
20 ÷ 4 =			
12 ÷	=	2	

Puzzle

Divide the clock face into three parts so that the sum of the numbers in each part is the same.



13 Smart Charts



Flowers of Different Colours

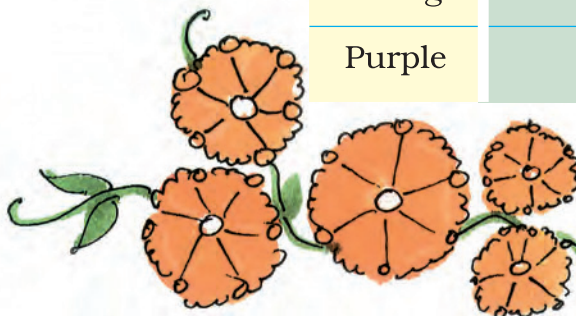
Have you been to a park?

What coloured flowers did you see?

Were most of the flowers yellow in colour?

Look at the different flowers in the picture. Complete the table:

Colour of flowers	Number of flowers
Blue	
Red	
Orange	
Purple	



Draw the right flower. Write how many there are.

- _____ are the most in number. How many?_____.
- _____ are the least in number. How many?_____.
- _____ are more than _____
- _____ are more than _____

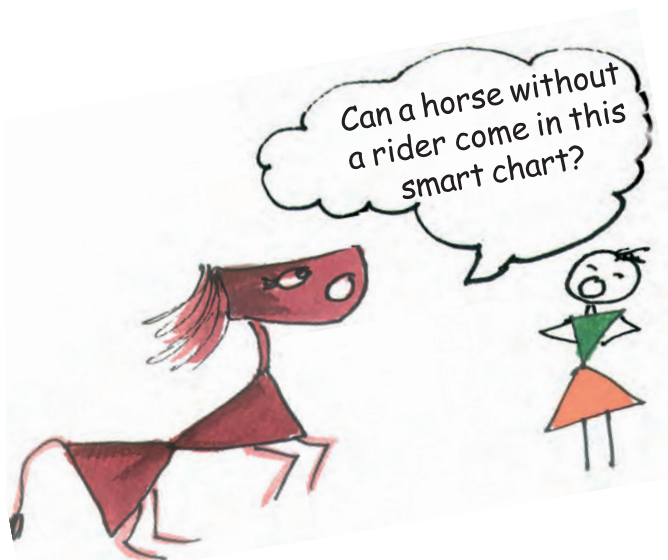


What do We See on the Road?

Look at the traffic scene in the picture and fill in the table.



This chapter is an early introduction to data handling, an important area of mathematics. By the end of primary school, children need to be able to collect and record data, to present it in the form of bar charts and tables, to recognise patterns in the data and to draw inferences. Teachers can take several interesting and even funny examples from children's own experiences. Pictures given here could also be used for different classification exercises, such as the number of petals of flowers.



Way of Travel	How many
Walking (people)	
Bicycles	
Scooters	

Answer the following questions.

a) In the picture which way of travel do you see the most?

b) Which way of travel (vehicle) do you see the least? _____

c) The number of people walking is more than the number of

d) The number of buses is less than the number of _____

How Many Times do You Get 6?

Have you played any games with dice?

How many dots are there on the different faces of a die?



- * Throw a die.
- * Look at the number of dots you get on the face of your die.
- * For each throw draw a mark / in front of that number in the table.
- * Throw the die 30 times and mark in the table each time.

For example, Rabia threw her die 30 times. She got  five times. In her table she marked:  |||||

Now fill in the table:

Face of the die	Number of times (/ for each throw)
	
	
	
	
	
	



- a) Which face of the die did you get the most number of times?

- b) How many times did  come up? _____ times
- c)  came up more number of times than
- d) Compare your table with that of the student sitting next to you. Do you find any difference in the two tables?

Find out from People Around You

1. Talk to people around you about their favourite sweets.

Fill in the table:

Favourite sweet	Number of people
Jalebi	



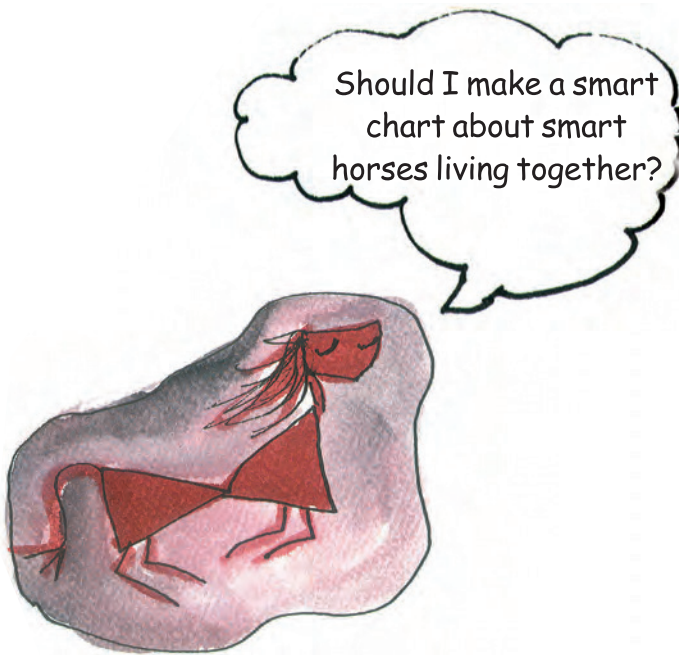
From the above table answer the following:

- Most favourite sweet _____
- Least favourite sweet _____
- _____ is liked more than _____
(Name of the sweet) (Name of the sweet)
- _____ is liked more than _____
- _____ is liked more than _____
- _____ is liked more than _____

Also find out from animals around you!

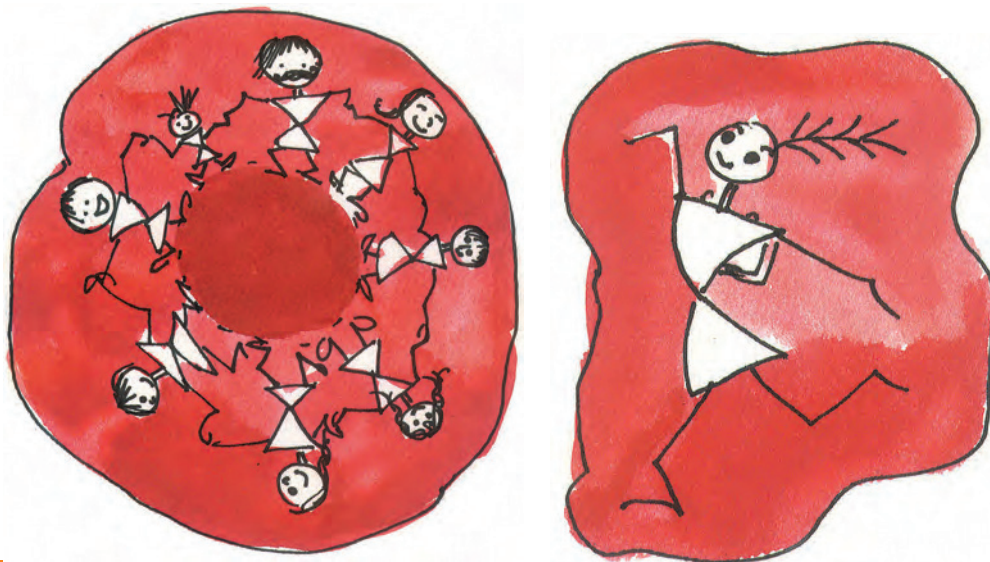


2. Ask your friends about the number of people living in their homes. Fill in the table.



Number of people living together	How many families
1 alone	
2 people	
3 people	
4 people	
5 people	
6 people	
7 people	
8 people	
.....	

- a) Most families have _____ people living in their homes.
 b) The smallest number of people living in a home is _____
 c) The number of families having 4 people is _____



3. What have your classmates brought for lunch today? Find out and note down.

Food item	Number of students

a) Food item brought for lunch by the biggest number of students _____

b) Food item brought by the smallest number of students _____



Getting Smart with Charts

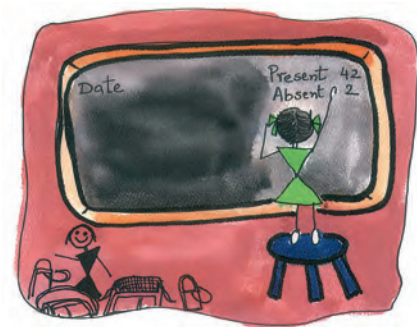
Attendance Board			
Date 8/2/2007			
Class	Number of students	Students present	Students absent
Class I	27	25	2
Class II	23	22	1
Class III	24	21	3
Class IV	22	18	4
Class V	25	23	2
Total			



This board shows the number of students in each class. It also shows the number of students present and absent.

- * How many children in all are there in the school? _____
- * How many children in all are absent on that day? _____

Absent Students' Chart



Class	Absent students
Class I	⦿ ⦿
Class II	⦿
Class III	⦿ ⦿ ⦿
Class IV	⦿ ⦿ ⦿ ⦿
Class V	

This is a chart to show the number of absent students. Each absent student is shown by ⦿ .

- * In the chart show the absent students of Class V.

Now look at the chart and fill in the blanks:

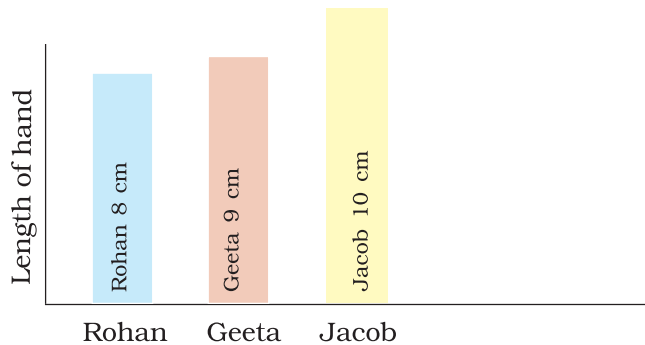
- The class with the highest number of absent students is _____.
- The class with the least number of absent students is _____.
- The class with 3 students absent is _____.
- The number of students absent in Class IV and Class V are _____ and _____.

How Long is Your Hand?

- * Make a group of 4 friends.
- * Cut strips from waste paper. The strips should be of the same width.
- * Measure the length of each student's hand with the paper strip. Cut the strip and write the name of the student.



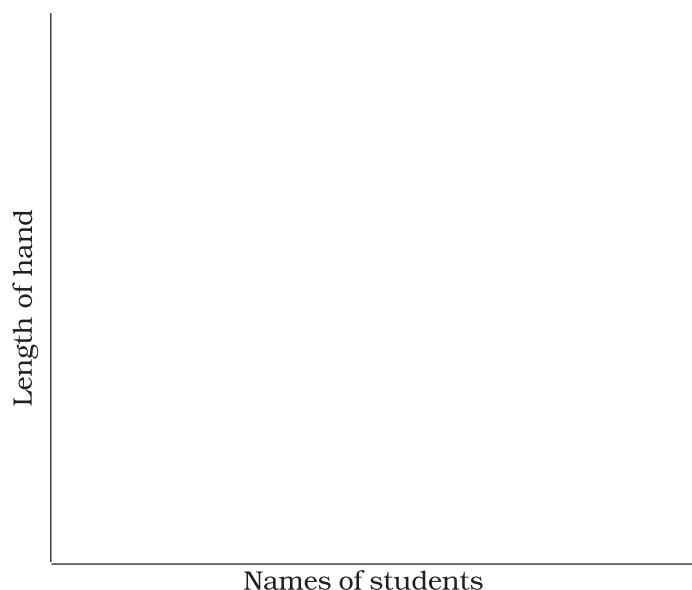
Rohan, Jacob and Geeta also measured their hands. They stuck their strips as shown.



Look at the picture and fill in the blanks:

- The length of Jacob's hand is _____ (more/less) than Geeta's hand.
- The length of Geeta's hand is _____ (more/less) than Rohan's hand.
- _____ has the longest hand.
- _____ has the shortest hand.

In the chart below stick the strips of all the friends in your group. Keep some space between the strips.



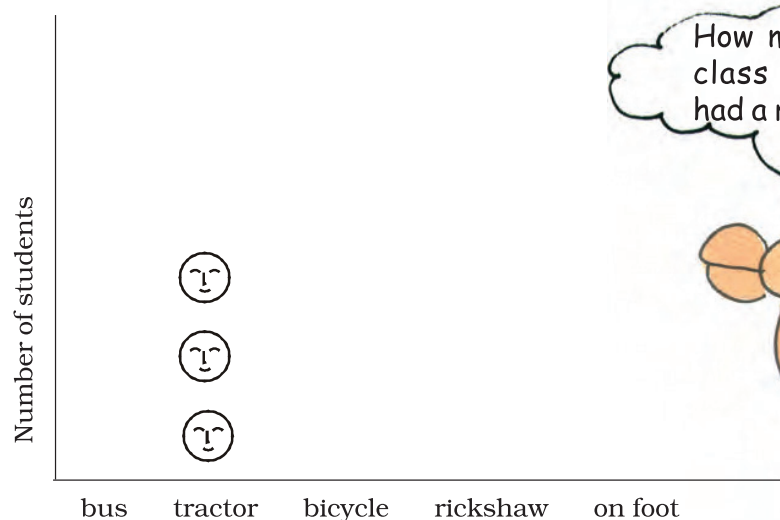
Children coming to School



Look at the picture and fill in the table.

Way of coming	Tractor				
Number of students	3				

3 students are coming by a tractor. We write 3 in the table. We also draw 3 faces on top of 'tractor' in the chart. Draw faces in the chart to show how many children come by bus, bicycle, etc.



How many in your class have never had a ride on me?



Fill in the blanks:

- The most students come to school by _____.
- The number of students walking to school is _____
(more/less) than the students coming on bicycle.
- The least students come to school by _____.

So, isn't this a smart chart! By simply looking at it we can know so much. Let us make more such charts.

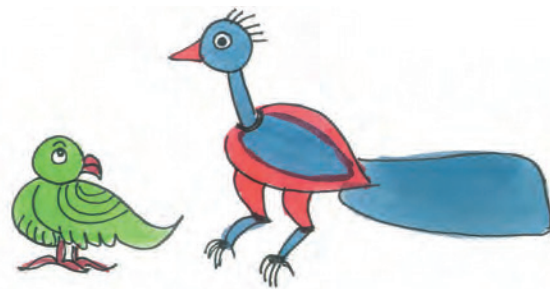


Practice Time

Make your own smart charts about things around you.

Like —

- * Which bird has the most colours?



- * Which is the animal which is liked most as a pet?

A Vegetable You do not Like!

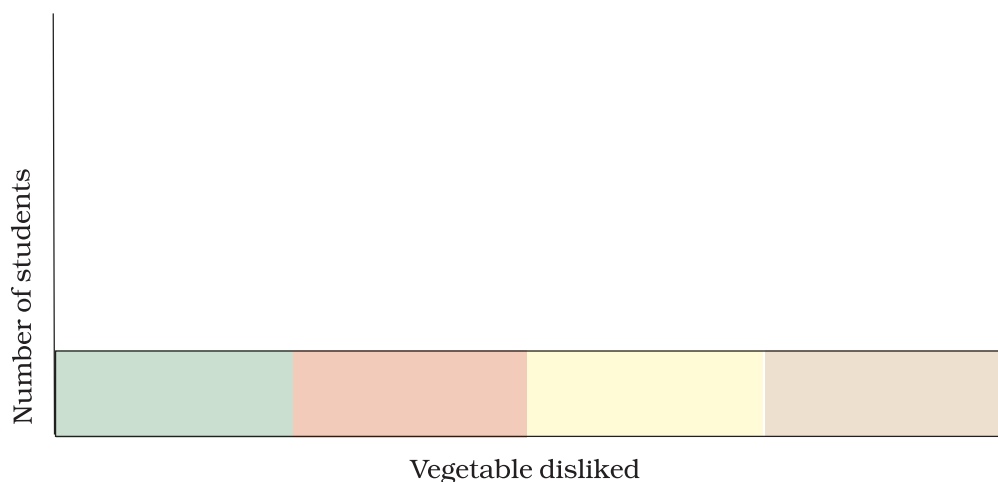
Which vegetable is most disliked? Ask your friends and complete the table.

Vegetable disliked	Number of students
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____



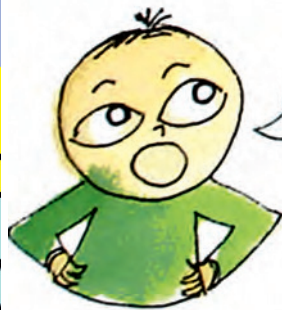
Use this table to draw faces in the chart below. Draw ☹️ for each child on top of the vegetable disliked.

- * The most disliked vegetable is _____.
- * The vegetable disliked by very few children is _____.



14

Rupees and Paise

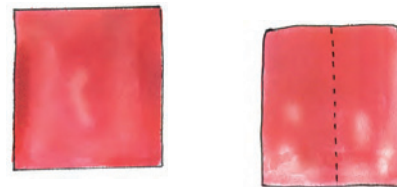


I have collected a lot of coins. But I don't have a purse.

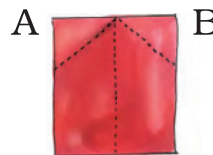


Let's Make a Money Purse

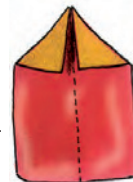
- * Take a sheet of paper and make a fold at the centre.



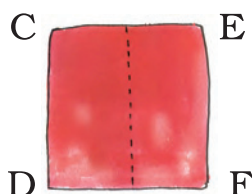
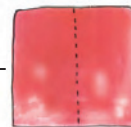
- * Fold the two corners 'A' and 'B' to meet at the dotted line.



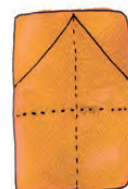
- * Now the sheet will look like this —



- * Fold the top part of the sheet backwards so that the back of the sheet looks like this — and the front looks like this —

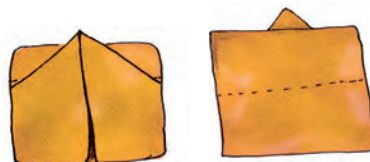


- * Place the front side of the sheet up and fold the edges CD and EF to meet at the dotted line.

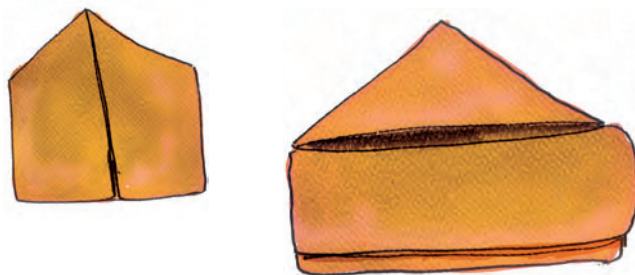


Now it will look like this:

- * Fold down the top along the dotted line so that the figure now looks like this:



- * Fold the back flap down and the money purse is ready!



Money for Our Purse

- * Collect different coins.
- * Keep a coin on a flat table. Place a thin paper on it.
- * With one hand hold the paper tight. Rub the tip of the pencil over the paper softly to trace the coin.
- * Slowly the face of the coin will appear.
- * Cut out the traced coins and keep them in your purse.



Now make notes by cutting paper and writing the value of the note on each.



Money Game

★ Use notes and coins to show the following amounts of money (you can also keep some money in the purse you had made).

– Twenty-six rupees



– 4 rupees 75 paise

– 78 rupees

– 130 rupees

– 8 rupees 75 paise

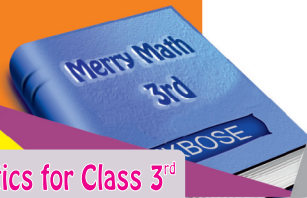
– 53 rupees



Write the amounts of money shown by the notes and coins.



One hundred one rupees



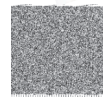
Mathematics for Class 3rd

$2 \times 1 = 2$
 $2 \times 5 = 10$
 $2 \times 10 = 20$

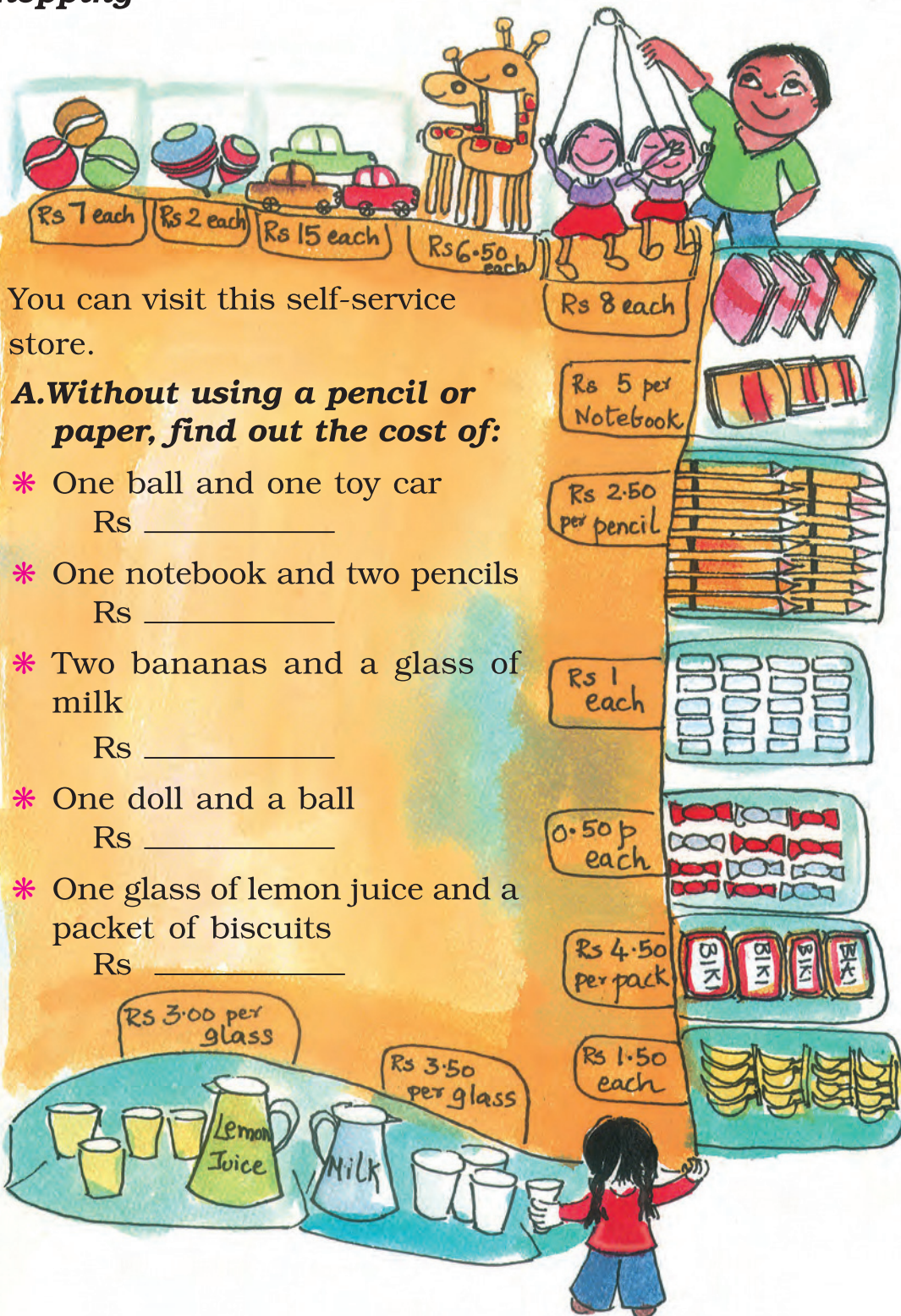


Merry Math - III





Shopping



B. Find out the total cost of:

- * One toy giraffe, one copy and a glass of lemon juice Rs _____
- * One glass of milk, one packet of biscuits and a banana Rs _____
- * One notebook, two pencils and two erasers _____
- * Two tops, three toffees and two bananas _____

C. What can you buy if you have a twenty-rupee note?

1 toy car, 1 lemon juice, 1 banana

- * _____, _____, _____
- * _____, _____, _____
- * _____, _____, _____
- * _____, _____, _____

Cash Memo
Self Service Store

Item	Rate per Item	Rs	Paise
	Total		

D. You need to make a cash memo for the things you bought.

Before adding, first guess how much money will be needed. Then find the total and check your guess.

Monu prepared the following cash memos:

Check the cash memos and correct them if you find a mistake.

Cash Memo Self Service Store				Cash Memo Self Service Store				Cash Memo Self Service Store			
Item	Rate per Item	Rs	Paise	Item	Rate per Item	Rs	Paise	Item	Rate per Item	Rs	Paise
1 Ball	7	7	00	1 Toy car		15	00	1 Toy car	6.50	6	50
3 Pencils	2.50	7	50	3 Glass milk	3.50	10	00	3 Pencils	2.50	7	50
5 Toffees		2	50	4 Notebooks	5	20	50	7 Toffees	.50	3	50
Total		17	00	Total		45	00	1 Biscuit	4.50	4	50
								Total		21	50

* Add the following:

a) Rs 12.50

+ Rs 13.00

b) Rs 55.50

+ Rs 14.00

c) Rs 30.00

+ Rs 31.50

* Subtract the following:

a) Rs 25.50

- Rs 11.50

b) Rs 103.50

- Rs 62.00

c) Rs 19.50

- Rs 7.00

E. You have 30 rupees with you. Find out how much money will be left after buying the following items:

* One ball, one doll and one toy giraffe

Total cost _____. Money left _____.

* Two bananas, one pack of biscuits and two glasses of lemon juice.

Total cost _____. Money left _____.





- * Three notebooks, two pencils and two erasers.
Total cost _____. Money left _____.

Practice Time

- A. Three friends wanted to buy a cricket bat and ball.

Bina had Rs 48.50, Raman had Rs 55.50 and Venu had Rs 38.00. How much money did they have in all?



- B. Hari booked a railway ticket for Rs 62.50. He gave a 100-rupee note. How much money will he get back with the ticket?

- C. Gita and her friends went shopping. She bought things for Rs 58, Rs 37 and Rs 22. Gita had a hundred-rupee note. How much money should she borrow from her friends to pay the bill?



Mumbai News

Children Freed from Factory



10 young children working in a bangle factory were set free today. A news reporter and the police found them in a sad condition. The factory made the children work very hard. It paid them only Rs 80 a day.

The children are happy to go back to their homes in their village. They will go to a special school so that they can learn to study like other

children their age. By making children work, the factory tries to save money. The police will now take action.

Let us see how much money the factory tries to save.

Money 1 older worker should get = Rs 513 a day

Money 1 child is paid = Rs 80 a day

On 1 person the factory saves Rs 513 - ____ = Rs 433 a day

On 10 persons the factory saves

Rs 433×10 = Rs ____ a day

Find Out

In your area are there shops or factories where young children are made to work?

Talk to some of these children.

How much are they paid there?

Understanding of 'money' need not only be about buying or selling. Teachers can talk about children's experiences of related issues, such as, wage and work etc.

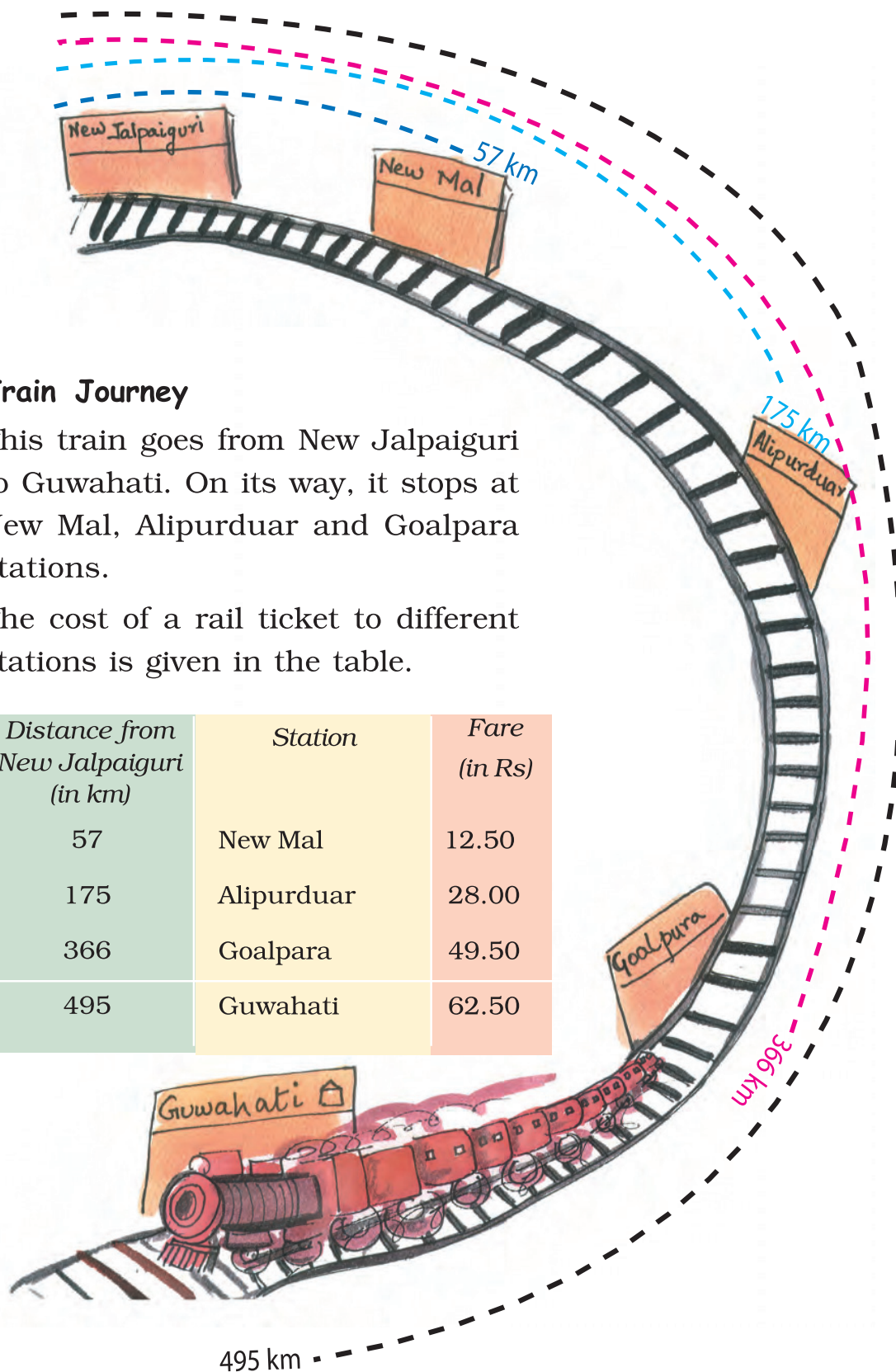


Train Journey

This train goes from New Jalpaiguri to Guwahati. On its way, it stops at New Mal, Alipurduar and Goalpara stations.

The cost of a rail ticket to different stations is given in the table.

Distance from New Jalpaiguri (in km)	Station	Fare (in Rs)
57	New Mal	12.50
175	Alipurduar	28.00
366	Goalpara	49.50
495	Guwahati	62.50

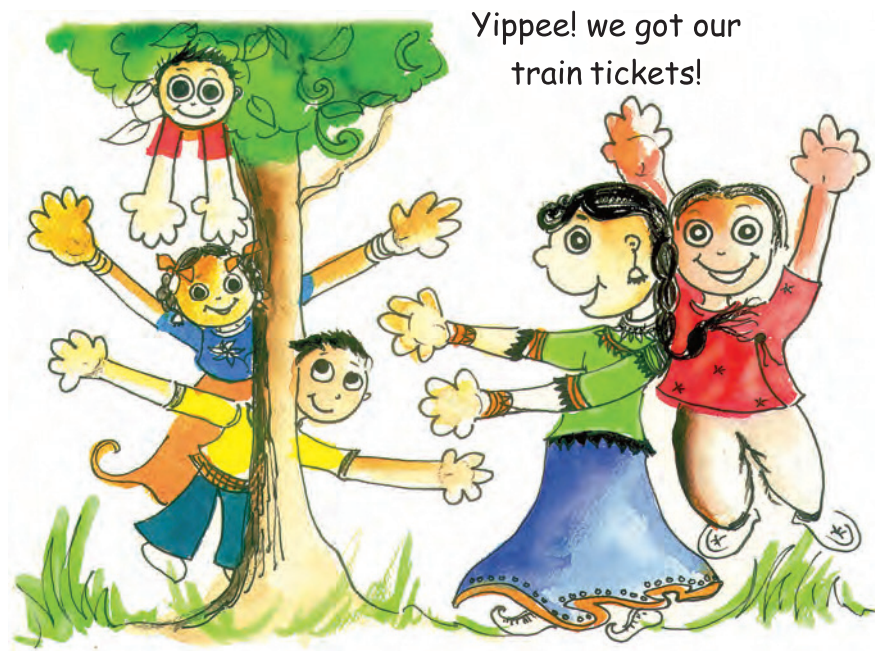


Find the distance:

- a) From New Mal to Guwahati _____
- b) Between New Mal and Goalpara _____
- c) From Alipurduar to Guwahati _____
- d) Between New Mal and Alipurduar _____
- e) From Goalpara to Guwahati _____

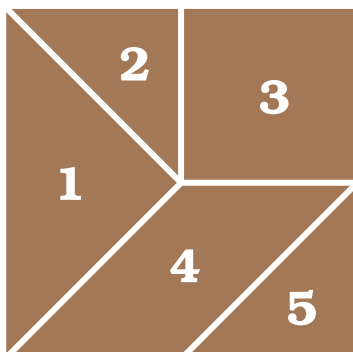
Find the cost of tickets:

- a) Bhupen is going from New Jalpaiguri to Alipurduar.
What is the cost of his ticket?
- b) Indira has to go from New Jalpaiguri to Goalpara.
How much does she pay for the ticket?
- c) Debu, Shoma and Gobind are going from New Jalpaiguri to
New Mal. What amount will they pay for three tickets?
They give a Rs 50 note for the tickets. How much money will
they get back?

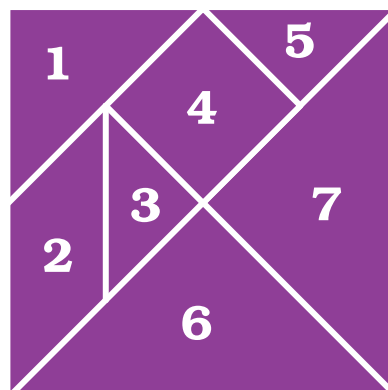


A Page to Cut Out

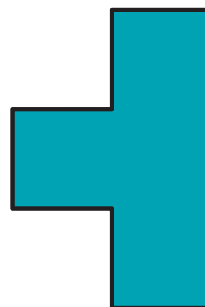
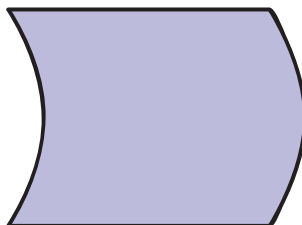
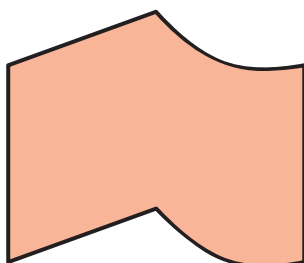
5-piece tangram (p 66)



7-piece tangram (p 67)



Cut these tiles and paste on a card. Make as many copies as you want and cover the floor.



You can cut these out and use as play money.