

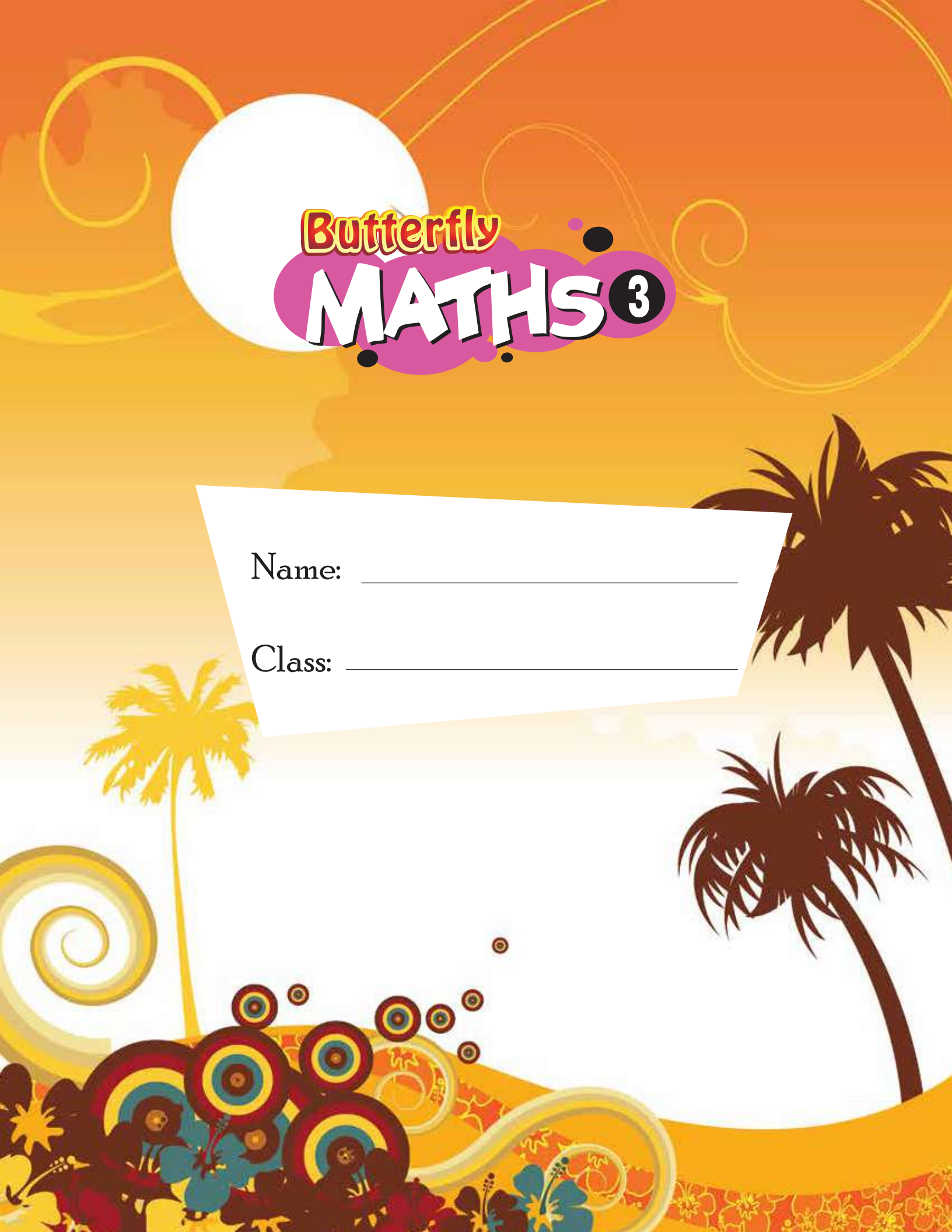
Butterfly

MATHS 3



MONTESSORI & PRIMARY
CURRICULUM

عالمی معیار، مسلم اقدار



Butterfly

MATHS 3

Name: _____

Class: _____

PREFACE

Mathematics is called the mother of all subjects, but why?

That's because mathematics is part of all subjects. We also need mathematics for making all kinds of things.

For example, you need mathematics to make machines, computers, videos, games, aeroplanes, houses, and medicines.

Now, it is the best time for you to learn this interesting subject. This book has lots of activities and thinking exercises to help you learn mathematics. You will learn to use mathematics to solve problems and come up with new ideas.

There are easy to do and step by step exercises in this book that let you practice mathematics in fun way.

So, enjoy learning the most important of all the subjects with this book!

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MEASUREMENT OF LENGTH, WEIGHT AND LIQUID

Annual Day of School

Kiran participated on the annual day of school. On that day, Kiran was going to play the role of a princess in a drama. For this, she needed a dress of princess. She asked her mother for that. Her mother decided to make her dress in blue and pink colour.

Mother went to bazar. She bought 5-metre cloth in blue, and 2-metre pink cloth from a shop. She purchased 5-metre golden lace from the other shop, but after came home, she got confused whether the lace was enough or not.



So, the mother asked Kiran to help her and measure this lace Kiran started to measure. She measured that the sleeves needed 1- metre, 1-metre for neck and 1-metre for the waist. The dupatta needed 2-metres of lace.

So, altogether mother need equals to 5-metres of lace. Her mother relaxed that she bought enough lace.

After two hours, Kiran's dress was ready for the play. She was so happy that her dress was so beautiful.



31 Measuring of length or distance and its units

Going somewhere? Do you know how far it is? To find out you need to measure the distance of your travel. For example, how far is your home from school? There is a counter in front of the driver of the car or van you use. It can tell you exactly how far your school is from your home.

Is there a pencil in your bag? How long was it when you bought it? What is the length of a pencil when you quit using it and go for a new one? Again, to answer these questions you need to know the length of the pencil.

Length is the distance from one end to the other end of an object.

Example: The length of a pencil is measured in centimetres, Length of bed in metres, while the distance between two places is measured in kilometres.

Addition of length or distance

Suppose you plan to go to the shop to buy some milk, from there you need to go to the bakery for a loaf of bread. Next, you will head to the pharmacy for medicine. To find the total distance you travel, add all the distances you have travelled.

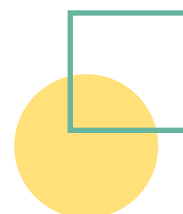
Relationship between metre (m) and centimetre (cm)

We know one of the 100th part of a metre (m) is called a centimetre (cm).

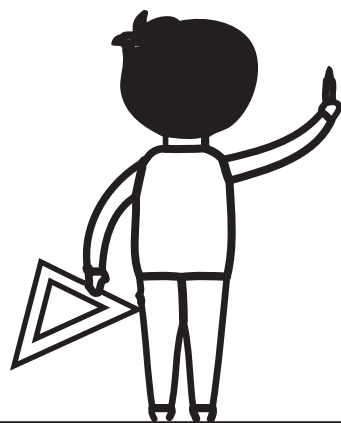
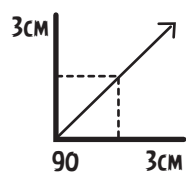
So, 1 metre = 100 centimetre or, 1 m = 100 cm
and, 100 cm = 1 m



Let's get started



Suppose we have an area that we want to use to play. This area is divided into two parts. One part is 24m and 14 cm long. The other area is 35m and 13 cm long. So what will be the total area that we have?



$$\begin{array}{r} 5 + 10 \\ 22 + 15 \end{array}$$

Step1: Add the **cm** column

Step2: Add the **m** column

Example:

Add 24 m 14 m and 35 m 13 m



	m	cm
	24	14
	35	13
+		
	59	27

Subtraction of length or distance

Sometimes we have an area from which we have to give away some area to others. That when you are supposed to subtract the two areas.

Example:

Subtract 14 m 13 cm from 35 m 13 cm

m	cm
35	13
- 14	13
21	00



Let's practice

1. Solve the following:

a. 28 m 35 cm + 56 m 18 cm = _____

b. 53 m 78 cm + 38 m 63 cm = _____

c. 105 m 96 cm + 256 m 13 cm = _____

d.

39 m	893 cm
+ 8 m	281 cm

e.

61m	18 cm
+16m	81 cm

2. Subtract the following:

a. $38\text{ m } 45\text{ cm} - 16\text{ m } 23\text{ cm} = \underline{\hspace{2cm}}$

b. $59\text{ m } 67\text{ cm} - 34\text{ m } 35\text{ cm} = \underline{\hspace{2cm}}$

c. $78\text{ m } 85\text{ cm} - 56\text{ m } 49\text{ cm} = \underline{\hspace{2cm}}$

d.
$$\begin{array}{r} 18\text{ m } 36\text{ cm} \\ - 12\text{ m } 22\text{ cm} \\ \hline \end{array}$$

e.
$$\begin{array}{r} 26\text{ m } 20\text{ cm} \\ - 14\text{ m } 14\text{ cm} \\ \hline \end{array}$$

3. Daily life word problems of measurement of length or distance.

- a. A cable roll is 450 m long. 234 m is used. How much roll is left?
- b. Dania has a green rope 8 m long and a blue rope 7 m long. What is the total length of both the ropes?
- c. A shopkeeper had 1280 m long fabric. 1090 m was sold. What is the length of the fabric left?
- d. In a race, an athlete ran 3 m and 60 cm. Next morning he ran 9 m and 45 cm. How many metres did he run in total?
- e. Maria has a rope 7 m long, and Rida has another rope 9 m long. What is the total length of both the ropes?
- f. Asim bought 9 m 75 cm of cloth. He used 2 m 30 cm from it. How much cloth is left?
- g. If the length of a bed is 225 cm and breadth is 115 cm, by how much does the length exceed the breadth? Find the sum of the length and breadth in m and cm.
- h. The bank is 26 m 45 cm away from my home and Hospital is 18 m 75 cm. How far the bank is as compare to hospital.

Sufyan Baking *Cake*

"Some guests are coming, please help me in the kitchen," Mama called Sufyan. He was busy painting a picture. Sufyan asked, "Who is coming?" "A few family friends with their children are coming to a tea party, and I have a lot of work. Please help me as I am baking a cake," said his mother. Sufyan likes cake that mama makes. He came to his mother and said, "Ok, let me help you in measuring all the ingredients. Please tell me the ingredients and their weights." His mother gave him the recipe;

200-gram flour

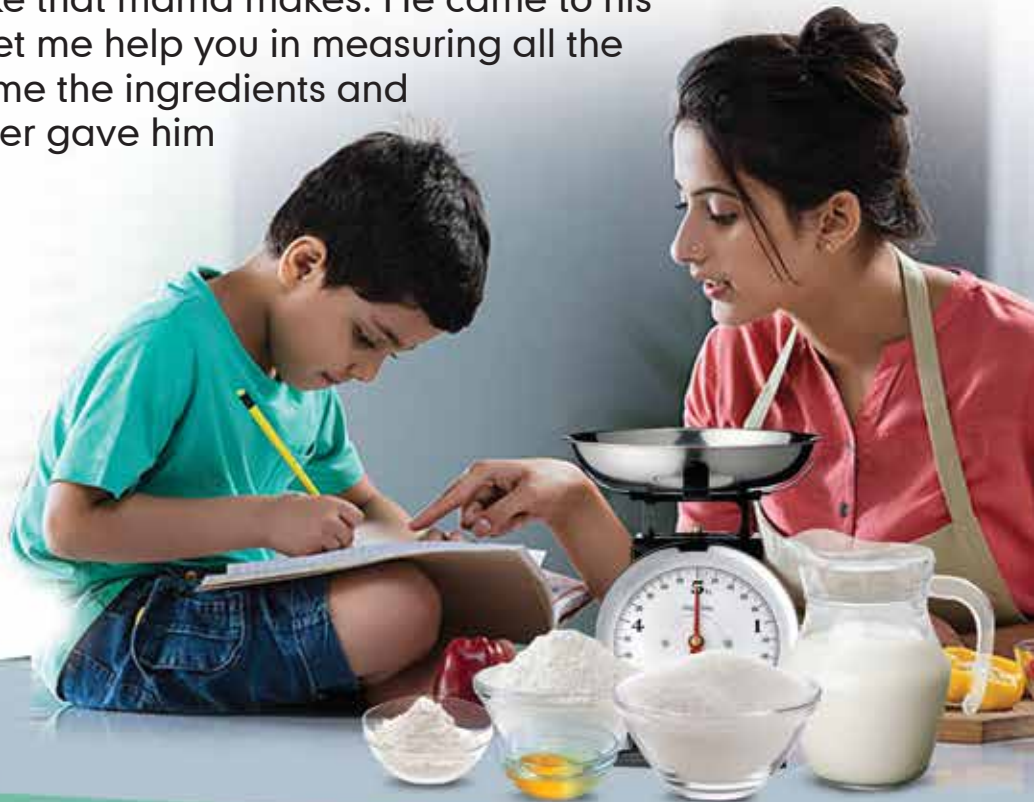
150-gram sugar

150-gram butter

100 ml of milk

10-gram baking powder

one egg (weight nearly 100 grams).



Sufyan took out the weighing machine and started measuring the ingredients. Then he added all ingredients in a big bowl and mixed all ingredients well. His mother helped him to put the pan in the oven. He asked his mama, "What should the temperature of the oven be?" Mama said, "It depends upon the total weight of ingredients." Sufyan said, "But how can I know it." Mama said, "Look, first take paper and pencil then write down the weight of all ingredients, and start adding them like 200 grams of flour + 150 grams of sugar = 350 grams, now add the weight of butter in it and similarly add the weight of all ingredients." Sufyan added weights of all ingredients one by one which was equal to 710 grams. He adjusted the temperature of the oven, accordingly. After half an hour cake was ready, it was super yummy.

3.2 Measuring of weight or mass and its units

Just like lengths and distances, you can add or subtract the weights. Remember to add kilograms to kilograms and grams to grams.

Relationship between kilogram (kg) and gram (g):

We know one of the 1000th part of a kilogram (kg) is called a gram (g).

So, 1 kilogram = 1000 gram

or, 1 kg = 1000 g and, 1000 g = 1kg



Let's get started

Addition of weight or mass

Step1: Add the **gram** column

Step2: Add the **kg** column

Example 1:

Add 75 kg 582 g and 13 kg 410 g

	kg	g
	75	582
+	13	410
	88	992

Example 2:

Add 94 kg 215 g and 6 kg 757 g

	kg	g
	94	215
		¹
+	06	757
	100	972

Example 3:

Rani purchased 5 kg 300 g of a packet of rice and 4 kg 200 g of a packet of wheat flour. How much is the total weight of both the packets?

Solution:

Weight of rice = 5 kg 300 g

Weight of wheat flour = 4 kg 200 g

Total weight of both the packets = 5 kg 300g + 4 kg 200 g

	Kg	g
	5	300
+	4	200
	9	500

Subtraction of weight or mass

Step 1: Subtract the gram column

Step 2: Subtract the kilogram column

Example 1:

Subtract 13 kg 410 g from 75 kg 582 g

	Kg	g
	75	582
–	13	410
	62	172

Example 2:

Danish weighs 39 kg 900 g. Mani weighs 35 kg 600 g. Who weighs more and by how much?

Solution:

Danish's weight = 39 kg 900 g

Mani's weight = 35 kg 600 g

Danish weighs more by =

39 kg 900 g – 35 kg 600 g

	Kg	g
	39	900
–	35	600
	04	300

Danish weighs more by = 4 kg 300 g



Let's practice

1. Add the following

a. $55 \text{ kg} \quad 540 \text{ g} + 12 \text{ kg} \quad 410 \text{ g} = \underline{\hspace{2cm}}$

b. $25 \text{ kg} \quad 505 \text{ g} + 15 \text{ kg} \quad 45 \text{ g} = \underline{\hspace{2cm}}$

c. $35 \text{ kg} \quad 001 \text{ g} + 1 \text{ kg} \quad 99 \text{ g} = \underline{\hspace{2cm}}$

d. **kg** **g**

8 575

+ 4 897

e. **kg** **g**

7 350

+ 2 150



2. Subtract the following

a. $78 \text{ kg} \quad 954 \text{ g} - 38 \text{ kg} \quad 603 \text{ g} = \underline{\hspace{2cm}}$

b. $22 \text{ kg} \quad 505 \text{ g} - 11 \text{ kg} \quad 750 \text{ g} = \underline{\hspace{2cm}}$

c. $435 \text{ kg} \quad 342 \text{ g} - 231 \text{ kg} \quad 132 \text{ g} = \underline{\hspace{2cm}}$

d. **kg** **g**

25 765

- 11 460

e. **kg** **g**

45 225

- 24 565



3. Daily life world problems of measurement of weight or mass

- a. Rida bought 4 kg 630 g of cherries, 2 kg 700 g of apples and 3 kg 345g of grapes. How much is the total weight of the three things?
- b. Sara went to the market and purchased the following things: bread 500 g, butter 500 g and cheese 1 kg 200 g. Find the total weight of the things of her purchases.
- c. In a sack, there was 42 kg 435 g of rice. 25 kg 90 g of more rice was placed in it. How much rice is in the sack now?
- d. Ali sends two parcels. One parcel weighs 985 g and the other parcel weighs 875 g. What is the total weight of the parcels?
- e. A vegetable vendor had 24 kg 750 g vegetables. He sold 12 kg 500 g vegetables in one day. What is the weight of vegetables that are left?
- f. My weight is 30kg 900 g. My friend weight is 28 kg 880 g. How much more is mine weight?
- g. A shopkeeper had 50 kg of sugar in stock. He sold 28 kg 500 g of it one day. How much sugar was left in his stock after selling it?
- h. Shahid bought 2 kg 500 g of potatoes on sunday, 1 kg 250 g of which was used. How many potatoes remained unused?



A Refreshing Treat from Miss Nadia

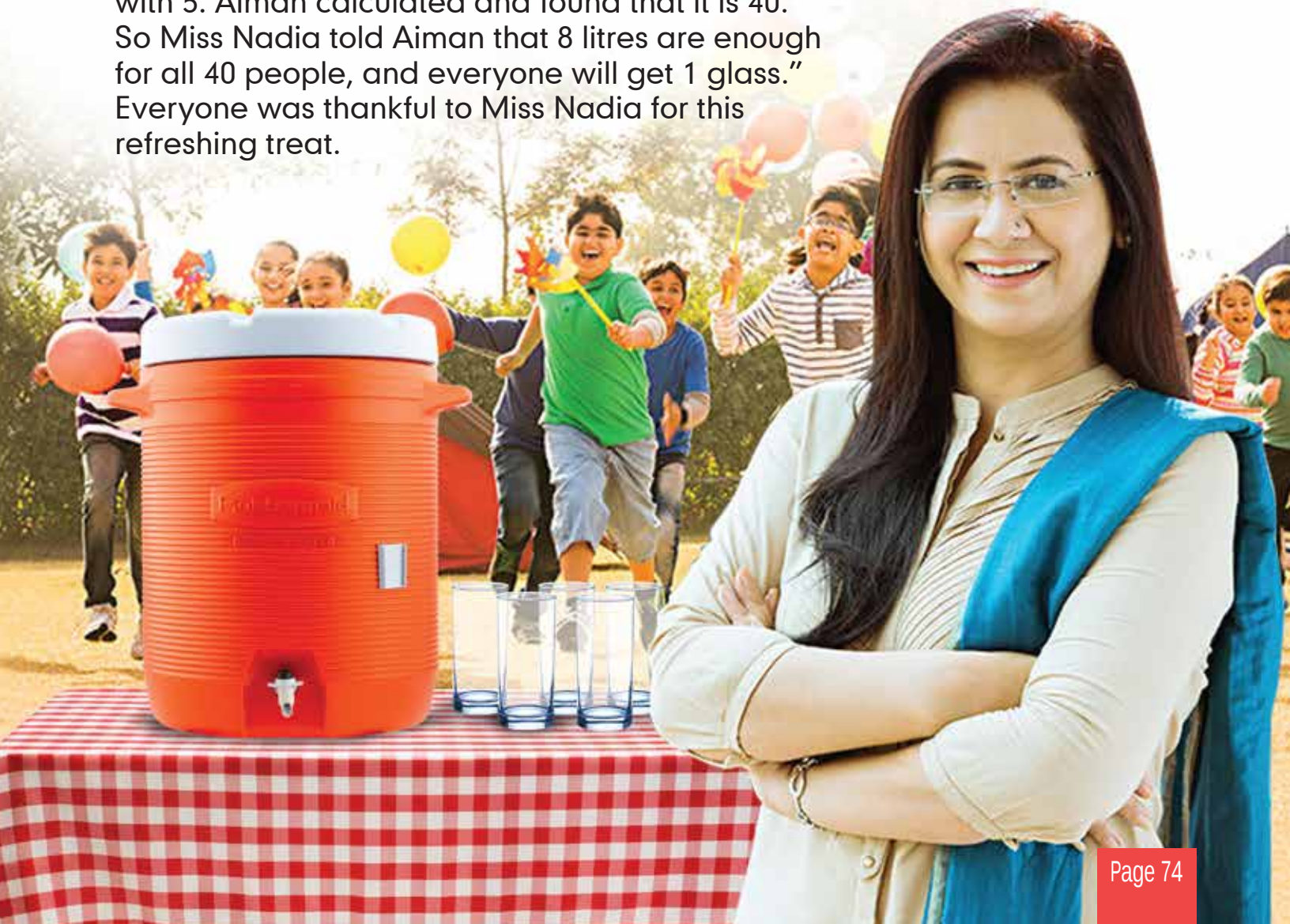
One day Aiman's class teacher Miss Nadia announced that next week our class is going on a picnic.

"Hurray!" the class screamed with joy. Miss Nadia said that everyone has to bring some nice refreshing drinks with them as the weather was a little warm. Miss Nadia decided to prepare some fresh drink for the children herself as well.

She took a large water cooler and put 5 litres of cold water, 1.5 litres of sugar syrup, and 1.5 litres of lemon squash. She mixed them all and prepared a delicious drink. Aiman asked Miss Nadia, "Miss will all of us have a glass of this delicious drink". Miss Nadia said, "Oh! You are right; let me check."

She calculated that the total volume of the drink is $5 + 1.5 + 1.5 = 8$ litres. 5 glasses of drink can be served from 1 litre. She asked Aiman to multiply 8 with 5. Aiman calculated and found that it is 40.

So Miss Nadia told Aiman that 8 litres are enough for all 40 people, and everyone will get 1 glass." Everyone was thankful to Miss Nadia for this refreshing treat.



3.3 Measuring of liquids or volume and its units

Relationship between litre (l) and millilitre (ml):

We know one of the 1000th part of a litre (l) is called a millilitre (ml).



So, 1 litre = 1000 millilitre

or, 1 l = 1000 ml

and, 1000 ml = 1 l



Let's get started

Addition:

Example 1:

Add 525 ml and 275 ml

Solution:

$$\begin{array}{r} 275 \text{ ml} \\ + 550 \text{ ml} \\ \hline 825 \text{ ml} \end{array}$$

Subtraction:

Example 2:

Subtract 675 ml from 385 ml

Solution:

$$\begin{array}{r} 675 \text{ ml} \\ - 385 \text{ ml} \\ \hline 290 \text{ ml} \end{array}$$

Example 3:

A container holds 20 l and 550 ml of milk. Out of it, 12 l and 350 ml milk is consumed. How much milk is left in the container now?

Solution:

The quantity of milk in the can = 20 l 550 ml

The quantity of milk consumed = 12 l 350 ml

The quantity of milk left = 20 l 550 ml – 12 l 350 ml

$$20 \text{ l} - 12 \text{ l} = 8 \text{ l}$$

$$550 \text{ ml} - 350 \text{ ml} = 200 \text{ ml}$$

Thus,

	l	ml
	20	550
–	12	350
	8	200

Therefore, the quantity of milk left = 8 l 200 ml

Example 4:

How much water should be added to 18 l of water to make it 26 l water?

Solution:

Total water should be

$$= 26 \text{ l}$$

Water at present

$$= 18 \text{ l}$$

Therefore, water required

$$= 8 \text{ l}$$



Let's practice

1. Add the following.

a. $8 \text{ l } 590 \text{ ml} + 5 \text{ l } 360 \text{ ml} = \underline{\hspace{2cm}}$

b. $10 \text{ l } 900 \text{ ml} + 18 \text{ l } 870 \text{ ml} = \underline{\hspace{2cm}}$

c. $56 \text{ l } 43 \text{ ml} + 652 \text{ l } 352 \text{ ml} = \underline{\hspace{2cm}}$

d. $16 \text{ l } 855 \text{ ml}$

$+ 8 \text{ l } 585 \text{ ml}$

e. $5 \text{ l } 25 \text{ ml}$

$+ 12 \text{ l } 860 \text{ ml}$

2. Find the Difference.

a. $9 \text{ l } 586 \text{ ml} - 5 \text{ l } 154 \text{ ml} = \underline{\hspace{2cm}}$

b. $17 \text{ l } 868 \text{ ml} - 9 \text{ l } 312 \text{ ml} = \underline{\hspace{2cm}}$

c. $65 \text{ l } 543 \text{ ml} - 43 \text{ l } 345 \text{ ml} = \underline{\hspace{2cm}}$

d. $5 \text{ l } 778 \text{ ml}$

$- 2 \text{ l } 243 \text{ ml}$

e. $91 \text{ l } 464 \text{ ml}$

$- 50 \text{ l } 354 \text{ ml}$

3. Daily life word problems of measurement of liquid.

a. A milkman sold 58 l 350 ml of milk in 4 days of a week and 65 l 765 ml of milk in next 3 days. What quantity of milk did he sell in the week?

b. Sana bought 650 ml of olive oil, 355 ml of almond oil and 3 l of sunflower oil. What is the total quantity of the 3 oils together?

c. Aleena consumed 25 l of water in 3 days and 38 l of water in the rest of the days of a week. How much water did she consume in the week?

d. Maha purchased 400 ml bottle of fizzy drink, 350 ml can of fruit juice and 2 l 350 ml of lemonade. What quantity of cold drinks did Maha purchase all together?

e. There is 588 l and 560 ml of water in the tank. 356 l, and 125 ml of water is consumed. How much water is left in the tank?

f. The capacity of a milk container is 20 l 500 ml of milk. If 12 l 400 ml of milk is put into the container then how much more quantity of milk can be filled in the container?

g. The consumption of petrol in car 'A' in a day is 18 l 280 ml, and the consumption of car 'B' is 15 l 296 ml. Whose consumption is less and by how much?

h. Hina made 25 l 600 ml of lemonade on the first day and 15 l 250 ml on next day. On which day lemonade was prepared in more quantity, and how much?

Butterfly

Based on the international standards of mathematics, this book covers all core areas of the subject. Each topic starts with easy to understand examples, which are followed by guided practice. Plenty of independent practice is an offer to help students master the mathematical skill. Each chapter ends with practical word problems to help the student learn the application of mathematics. All examples, exercises and word problems are age appropriate and exciting developing an in-depth understanding as well as interest in maths.

This book and all EAST resource materials, training videos, lesson plans, yearly breakups, half-yearly and annual assessment papers are also available online at <https://east.education>



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