Lesson-4: Subtraction

13 Periods (40 minutes each)

Learn Better (Main Course Book), Stay Ahead (Workbook), Book of Holistic Teaching, Book of Project Ideas, CRM signs, Poster

Animation, Animated Activities, Dictionary, eBook, Explainer Video, HOTS, I Explain, Infographic, Know it Right, Mental Maths, Quick Maths, Quiz, Slideshow

Affirming better: I am a good learner.

Curricular Goals and Objectives (NCF)

To enable the students:

- to develop a strong conceptual understanding of subtraction.
- to strengthen problem - solving skills by applying subtraction in practical situations.
- to enhance computational fluency using different subtraction strategies.
- to promote the use of multiple representations.
- to encourage collaborative learning through group activities and discussions

Methodology

Period 1

Teacher: Good morning students. How are you?

Teacher: Let us begin with a fun activity. Everyone, stand up and walk 10 steps forward. Now, take 4 steps backward. How many steps have you moved in total?

SHOULD DO 5 MIN.

(If there is no proper space in class, students can do the activity in the ground.)

Teacher: Yes, you moved 6 steps forward because 10 – 4 = 6.

Teacher: Now, let us try another one. Walk 12 steps forward, take 5 steps back. How many steps forward are you now?

Teacher: That is right! 12 – 5 = 7. Subtraction is about taking away and finding what remains. Today, we will explore subtraction in many fun ways.

Affirming better

Teacher: Repeat after me: 'I am a good learner.'

Teacher: Why is it important to believe in yourself?

SHOULD DO 5 MIN.

Teacher: Yes, because when we believe, we try harder and improve.

Teacher: What do you do when something is difficult?

Teacher: Correct. We ask for help, practise and stay patient.

Teacher: Think of one thing you learned recently. Keep it in your mind.

Teacher: Let us say it again: 'I am a good learner.'

Teacher: Well done. Now, let us begin our lesson.

Teacher: We will begin a new chapter, Subtraction. We are going to use a KWL chart to help us organise our thoughts and learning. I have made a KWL format on the blackboard. Please take out your notebooks and draw the same format in your notebooks.

SHOULD DO 10 MIN.

K	W	L

Teacher: Take a few minutes to think and write. If you have any questions, feel free to ask.

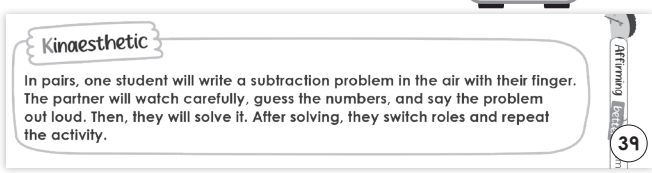
Teacher: You all did an amazing work in this activity. Let us move to Re–KAP activities. We will use Kinaesthetic, Auditory and Pictorial activities today to make our learning exciting. Let us start with the Kinaesthetic activity.

Kinaesthetic

Teacher: Who will read and explain the activity?

(Give students time to perform the activity and provide assistance as needed.)

MUST DO 10 MIN.

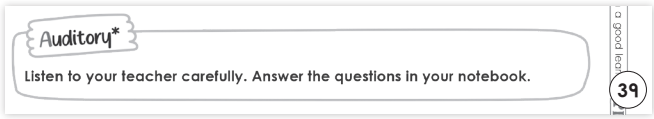


Teacher: Well done, everyone.

Auditory

Teacher: Now, let us move to the auditory activity. Listen carefully to the following questions and solve the addition problems.

MUST DO
5 MIN.



Teacher: Ritesh has 26 balloons. The wind blew and some of the balloons flew away. He counted the balloons again, there were 21.

1. How many balloons flew away?
2. What operation did you do to set the answer?

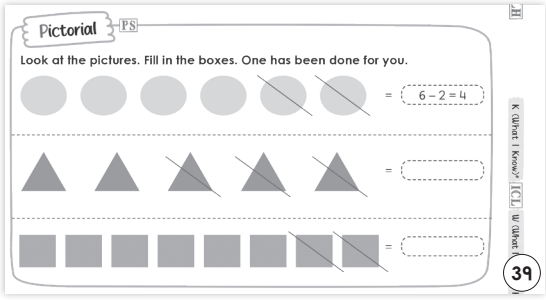
Teacher: Great work. Now, let us check our answers together.

You may show the **eBook** given on digital platform.

Pictorial

Teacher: Now, let us look at this picture. Who will tell me what to do in this activity?

MUST DO
5 MIN.



Teacher: Yes, quickly count the objects in each row and complete the subtraction sentence. One has been done for you.

(Guide the students to complete the activity.)

Teacher: Well done students, Let us have a huge round of applause. See you in the next class.

Differentiated Activities

110 km/hr

Think of a real life situation where subtraction is used, like sharing toys or removing books from a shelf. Write a short sentence about it.

80 km/hr

Gather 10 small objects like buttons or pencils. Remove some and say how many are left.

40 km/hr

Hold up 5 fingers. Fold 2 down. How many are left? Try with different numbers.

Home Task

Find five objects at home like pencils, books or fruits. Remove some and write a subtraction sentence for each.

Example: I had 6 apples, I ate 2. Now I have 4 (6 − 2 = 4). Draw or take pictures to show before and after.

Period 2

Teacher: Good morning, students. How are you today?

Teacher: Let us start with a quick subtraction game. I will say a number and you will subtract a smaller number from it quickly.

SHOULD DO
5 MIN.

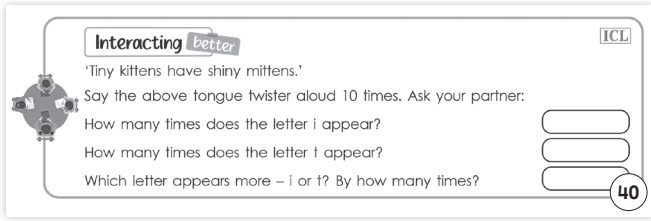
- What is 15 − 7?
- What is 20 − 12?
- What is 18 − 9?

Teacher: Great work! Subtraction helps us find what is left. Now, let us move to our interactive activity.

Interacting better

Teacher: Look at the tongue twister. Read it with me. Tiny kittens have shiny mittens.

MUST DO
10 MIN.



Teacher: Say it again, a little faster.

Teacher: How many times does the letter 'I' appear?

Teacher: Yes, count carefully. How many times does the letter 't' appear?

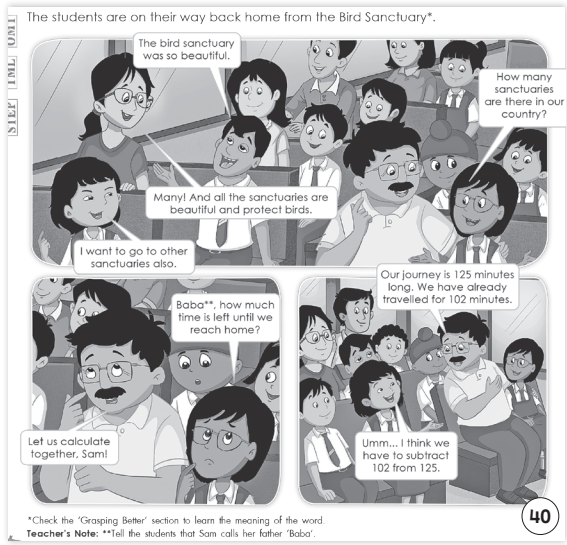
Teacher: Good, compare the two numbers.

Teacher: Which letter appears more? By how many times?

Teacher: Great thinking. Let us move to the story.

MUST DO
15 MIN.

You may show the **Animation** of the story given on digital platform.

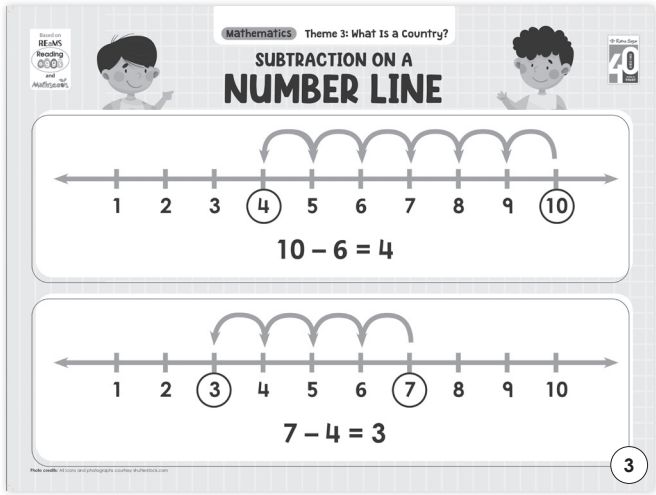


Teacher: Who likes to listen story?
Teacher: Open your Main course book to page 40. We will read the story turn by turn. Each student will read a few lines, then explain what they understood
Teacher: Who would like to start?
(Student reads a few lines.)
Teacher: Great reading. Can you explain what just happened in the story? What are the children talking about?
Teacher: Yes, they are returning from the bird sanctuary.
Teacher: One student is asking, how much time is left to reach home?
Teacher: Their journey is 125 minutes. They have already traveled 102 minutes.
Teacher: What should we do to find the time left?
Teacher: Yes, we subtract.
Teacher: Who will subtract 102 from 125?
Teacher: Well done. 125 − 102 = 23 minutes.
Teacher: So, they will reach home in 23 minutes.
Teacher: Subtraction helps us in real life too.
You may show the **Dictionary** given on digital platform.
Teacher: Now, we will explore some new words that are important for this chapter. Let us go through the words given in the dictionary section.
(Explain the words mentioned in the dictionary section on the digital platform. Or write it down on the blackboard and explain it to the students)

MUST DO
10 MIN.

Poster

Teacher: Let us take a moment to look at the poster on the wall.



(Display and discuss the poster prominently in the classroom to reinforce the learning about subtraction using number line.)
Teacher: Great observation everyone. You all did a fantastic work today. Give yourselves a huge round of applause. See you in the next class.

Differentiated Activities

110 km/hr
Solve 18 − 7 and 25 − 9 using a number line. Draw the jumps and write the subtraction sentence.
80 km/hr
Start at 15 on a number line and take 6 backward jumps. Write the final number.
40 km/hr
Start at 10 and take 3 backward jumps on a number line. Say the final number aloud.

Home Task

Solve 7 − 3 and 12 − 5 using number line. Write the answers in your notebook.

Period 3

Teacher: Let us start with a quick subtraction quiz. I will ask questions and you will write the answers in your notebook.
1. What is 500 − 200?
2. What is 345 − 100?
3. What is 620 − 300?
4. What is 800 − 450?
5. What is 999 − 111?

SHOULD DO
5 MIN.

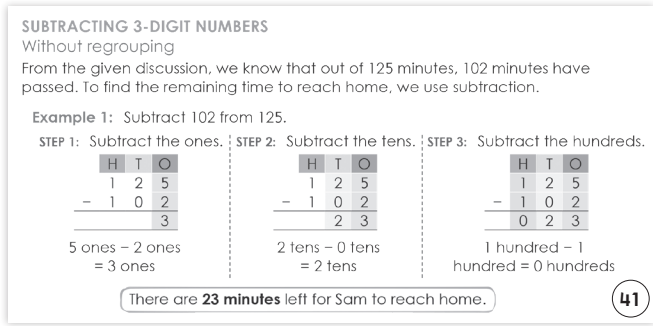
Teacher: Now, exchange notebooks with your partner and check the answers as I say them aloud.
Teacher: Well done. Now, let us learn how to subtract three-digit numbers.

Subtracting 3 - Digit Numbers

You may show the **Explainer Video** given on digital platform.

MUST DO
10 MIN.

Without regrouping


SUBTRACTING 3-DIGIT NUMBERS
Without regrouping
From the given discussion, we know that out of 125 minutes, 102 minutes have passed. To find the remaining time to reach home, we use subtraction.
Example 1: Subtract 102 from 125.
STEP 1: Subtract the ones. STEP 2: Subtract the tens. STEP 3: Subtract the hundreds.

	H	T	O
	1	2	5
−	1	0	2
			3

5 ones − 2 ones = 3 ones

	H	T	O
	1	2	5
−	1	0	2
		2	3

2 tens − 0 tens = 2 tens

	H	T	O
	1	2	5
−	1	0	2
	0	2	3

1 hundred − 1 hundred = 0 hundreds

There are **23 minutes** left for Sam to reach home.
41

Teacher: Open your Main course book to page 41 and look at the first example. We will subtract 102 from 125.
Teacher: Start with the ones place. 5 − 2 equals 3.
Teacher: Move to the tens place. 2 − 0 equals 2.
Teacher: Now, subtract the hundreds. 1 − 1 equals 0.
Teacher: So, 125 − 102 = 23.
Teacher: This means the children have 23 minutes left to reach home. Subtracting without regrouping is easy when each digit in the top number is larger than the bottom number.

Teacher: Subtraction helps us in real–life situations, like knowing how much time is left in a journey.

Teacher: Can you think of other times when subtraction is useful in daily life?

(Encourage students to share answers like knowing how much money is left, how many pages are left in a book or how many chocolates remain after sharing.)

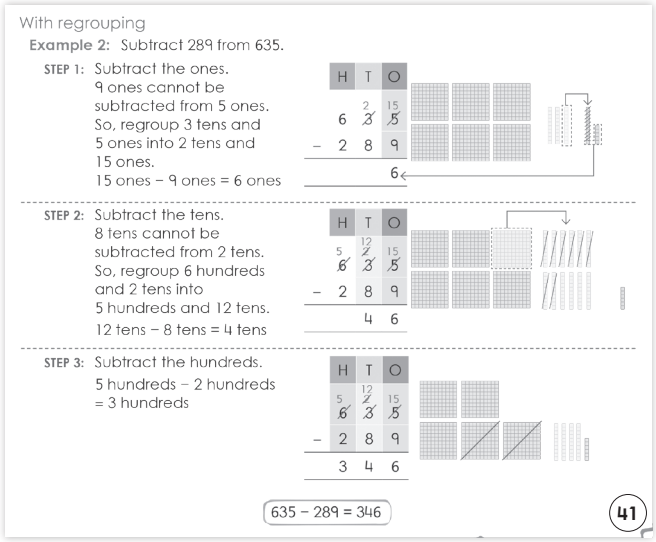
Teacher: Great thinking, everyone. Now, let us move to the next part of the lesson.

With regrouping

Teacher: Now, look at Example 2 on page 41. We will subtract 289 from 635.

MUST DO

10 MIN.


With regrouping

Example 2: Subtract 289 from 635.

STEP 1: Subtract the ones.
9 ones cannot be subtracted from 5 ones.
So, regroup 3 tens and 5 ones into 2 tens and 15 ones.
15 ones − 9 ones = 6 ones

	H	T	O
	6	2 3	15 5
−	2	8	9
			6

STEP 2: Subtract the tens.
8 tens cannot be subtracted from 2 tens.
So, regroup 6 hundreds and 2 tens into 5 hundreds and 12 tens.
12 tens − 8 tens = 4 tens

	H	T	O
	5	12 2	15 5
	6	3	
−	2	8	9
		4	6

STEP 3: Subtract the hundreds.
5 hundreds − 2 hundreds = 3 hundreds

	H	T	O
	5	12 2	15 5
	6	3	
−	2	8	9
	3	4	6

635 − 289 = 346

41

Teacher: Can we subtract 9 from 5 in the ones place? No. So, we regroup.

Teacher: Borrow 1 ten from the tens place. Now, we have 15 − 9 = 6.

Teacher: Move to the tens place. Can we subtract 8 from 2? No. We borrow from the hundreds place.

Teacher: Now, 12 − 8 = 4.

Teacher: Finally, subtract the hundreds. 5 − 2 = 3.

Teacher: So, 635 − 289 = 346. Regrouping helps when we cannot subtract directly.

Calculating better

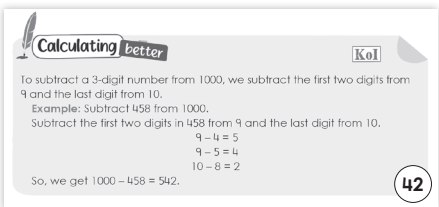
Teacher: Turn to page 41 in your Main Course Book. Look at the 'Calculating better' section.

SHOULD DO

5 MIN.

Teacher: There is a trick to subtracting a number from 1000.

Teacher: Instead of regular subtraction, subtract the first two digits from 9 and the last digit from 10.


Calculating better

KoI

To subtract a 3-digit number from 1000, we subtract the first two digits from 9 and the last digit from 10.

Example: Subtract 458 from 1000.

Subtract the first two digits in 458 from 9 and the last digit from 10.

9 − 4 = 5
9 − 5 = 4
10 − 8 = 2

So, we get 1000 − 458 = 542.

42

Teacher: Example: 1000 − 458

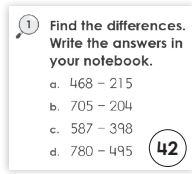
- 9 − 4 = 5
- 9 − 5 = 4
- 10 − 8 = 2

Teacher: So, 1000 − 458 = 542.

Teacher: Let us move to the exercises.

You may show the **Animated Activites** given on the digital platform.

Teacher: Open Exercise 1 on page 41. Solve questions (a) to (c) in your notebooks.


1 Find the differences. Write the answers in your notebook.

a. 468 − 215
b. 705 − 204
c. 587 − 398
d. 780 − 495

42

Teacher: Work step by step and check for regrouping where needed.

Teacher: Raise your hand if you need help.

MUST DO

10 MIN.

Teacher: You all did an amazing work today. Let us give ourselves a huge round of applause for all the hard work. See you in the next class.

Differentiated Activities

110/hr

Solve three 3–digit subtraction problems with regrouping and explain the steps:

753– 428 = ?, 642 − 389 = ?

80 km/hr

Solve two 3–digit subtraction problems using number blocks or drawings: 520 − 315 = ?, 715 − 402 = ?

40 m/hr

Solve one 3–digit subtraction problem without regrouping and say the steps aloud: 864 − 421 = ?, 732 − 210 = ? always write in this format only

Home Task

Solve question (d) of Exercise 1 given on page 41 in your Main Course Book. Write the answers neatly in your notebook.

Period 4

Teacher: Let us begin with a quick subtraction quiz. Write the answers in your notebook.

1. What is 345 − 120?
2. What is 572 − 341?
3. What is 689 − 254?
4. What is 910 − 605?
5. What is 777 − 333?

SHOULD DO

5 MIN.

Teacher: Now, exchange notebooks with your partner and check the answers as I say them aloud.

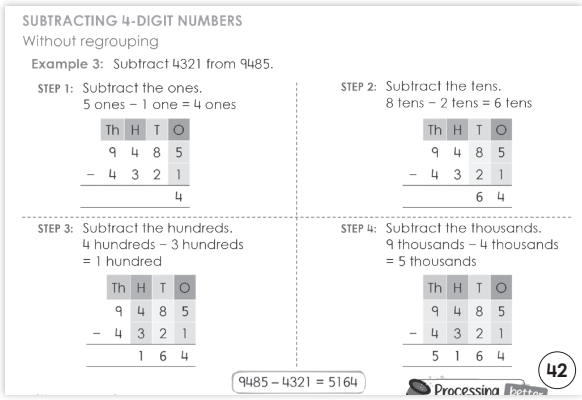
Teacher: Well done. Now, let us move to subtracting four–digit numbers.

Subtracting 4 - Digit Numbers

Without regrouping

Teacher: One TV costs 9485 and another costs 4321. How much more expensive is the first TV?

MUST DO
5 MIN.



Teacher: To find the difference, we need to subtract 4321 from 9485.

Teacher: Let us solve it step by step.

1. Subtract the ones place – 5 minus 1 equals 4.
2. Subtract the tens place – 8 minus 2 equals 6.
3. Subtract the hundreds place – 4 minus 3 equals 1.
4. Subtract the thousands place – 9 minus 4 equals 5.

Teacher: So, 9485 − 4321 = 5164.

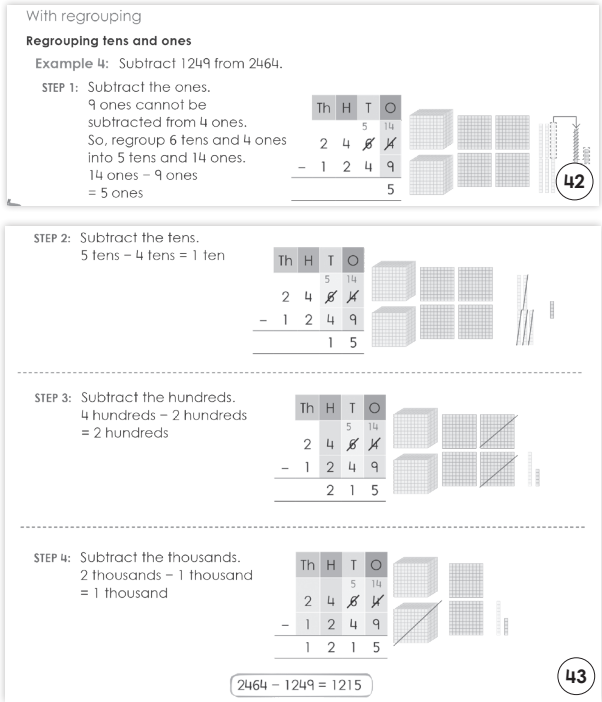
Teacher: When we do not need to borrow, subtraction is simple and straightforward.

With regrouping

Regrouping tens and ones

Teacher: But what if we need to subtract numbers where borrowing is necessary?

MUST DO
5 MIN.



Teacher: Imagine you saved 2464 rupees for a mobile phone, but its price is 1249 rupees less than that. How much extra money do you have?

Teacher: Let us solve 2464 − 1249 step by step.

Teacher: Can we subtract 9 from 4 in the ones place?

Teacher: No. So, we regroup. Borrow 1 ten from the tens place. Now, we have 14 − 9 = 5.

Teacher: Move to the tens place. Can we subtract 4 from 5?

Teacher: Yes, 5 − 4 = 1.

Teacher: Subtract the hundreds. 4 − 2 = 2.

Teacher: Subtract the thousands. 2 − 1 = 1.

Teacher: So, 2464 − 1249 = 1215.

You may show the **I Explain** given digital platform.

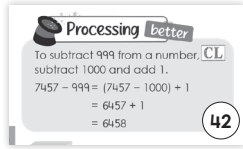
Processing better

Teacher: Turn to page 42 in your Main Course Book. Look at the 'Processing better' section.

SHOULD DO
5 MIN.

Teacher: Sometimes, when we subtract 999, we can use a shortcut instead of regular subtraction.

Teacher: Example: 7457 − 999

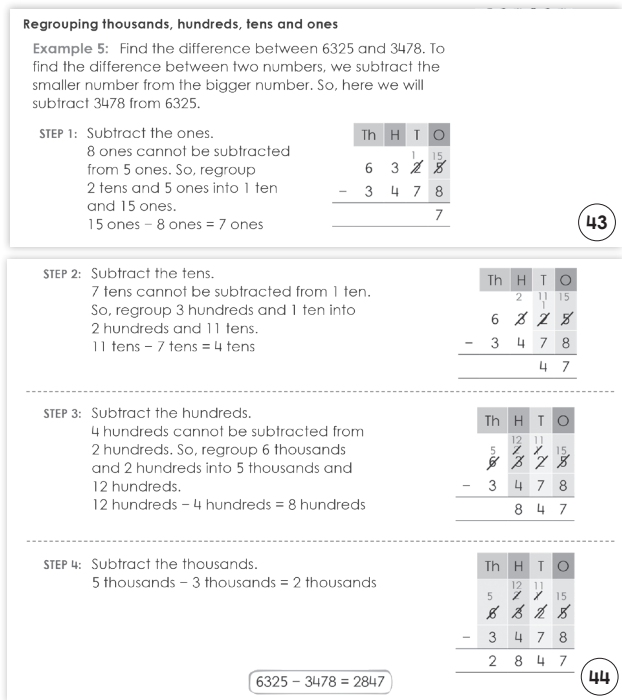


1. Instead of subtracting 999, subtract 1000 and add 1.
2. 7457 − 1000 = 6457
3. 6457 + 1 = 6458

Teacher: This trick helps us solve problems faster. Let us try one together.

MUST DO
5 MIN.

Regrouping thousands, hundreds tens and ones



Teacher: Now, let us solve a bigger subtraction problem.

Teacher: Let us subtract 3478 from 6325.

1. Subtract the ones – 5 minus 8 is not possible. Borrow 1 ten. Now, 15 − 8 = 7.
2. Subtract the tens – 1 minus 7 is not possible. Borrow from the hundreds. Now, 11 − 7 = 4.
3. Subtract the hundreds – 12 minus 4 = 8.
4. Subtract the thousands – 5 minus 3 = 2.

Teacher: So, 6325 − 3478 = 2847
(Demonstrate the process of finding solution on board.)

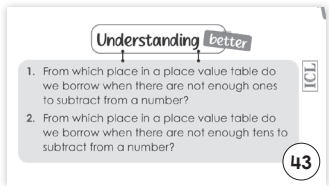
Understanding better

Teacher: Let us think about how we borrow while subtracting. Look at the questions in your Main course book.

SHOULD DO
5 MIN.

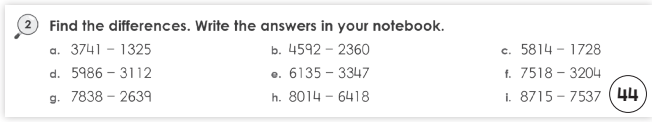
1. From which place in a place value table do we borrow when there are not enough ones to subtract from a number?

Teacher: Yes, we borrow from the tens place. If there are not enough ones, we take 1 ten and convert it into 10 ones.


Understanding better
1. From which place in a place value table do we borrow when there are not enough ones to subtract from a number?
2. From which place in a place value table do we borrow when there are not enough tens to subtract from a number?
43

(Guide the students to do the next question in a similar way.)

Teacher: Open Exercise 2 on page 43. Solve questions (a) to (e) in your notebooks.


2 Find the differences. Write the answers in your notebook.
a. 3741 − 1325 b. 4592 − 2360 c. 5814 − 1728
d. 5986 − 3112 e. 6135 − 3347 f. 7518 − 3204
g. 7838 − 2639 h. 8014 − 6418 i. 8715 − 7537
44

Teacher: Work step by step and check for regrouping where needed.

Teacher: Raise your hand if you need help.

Teacher: Today, we learned how to subtract four−digit numbers with and without regrouping.

MUST DO
10 MIN.

Give yourselves a huge round of applause for your effort today.

Teacher: See you in the next class with more exciting learning.

Differentiated Activities

110 /hr

Solve three 4-digit subtraction problems with regrouping and explain the steps: 7254 − 4896 = ?, 8132 − 5721 = ?

80 m/hr

Solve two 4-digit subtraction problems using number blocks or drawings: 6510 − 3215 = ?, 7345 − 4120 = ?

40 m/hr

Solve one 4-digit subtraction problem without 8764 − 4321 = ?, 5032 − 3010 = ?

Home Task

Solve questions (f) to (i) of Exercise 2 given on page 43 in the Main Course Book. Write the answers neatly in your notebook.

Period 5

Teacher: Let us begin with a fun True or False activity.

Teacher: If you think the statement is true, stay seated and clap twice. If you think the statement is false, stand up and clap once.

SHOULD DO
5 MIN.

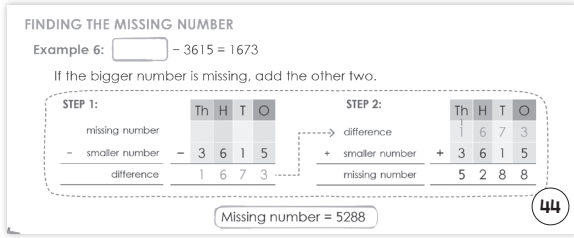
1. In subtraction, the order of numbers does not matter.
2. When subtracting, if the top digit is smaller than the bottom digit, we borrow.
3. Subtraction always makes a number bigger.
4. If the missing number in subtraction is the bigger number, we add the given numbers.
5. If the missing number is the smaller number, we subtract the difference from the bigger number.

Teacher: Great work. Now, let us move on to finding the missing number.

MUST DO
15 MIN.

Finding The Missing Number

Teacher: Open your Main Course Book to page 44. Look at Example 6.

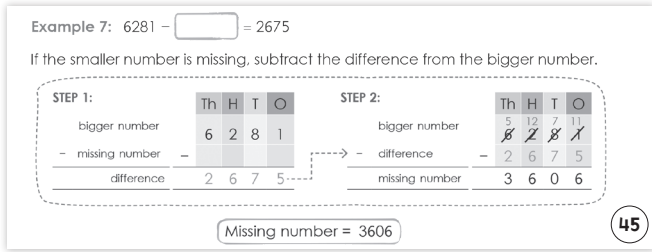

FINDING THE MISSING NUMBER
Example 6: ____ − 3615 = 1673
If the bigger number is missing, add the other two.
STEP 1: missing number; − smaller number (3615); difference (1673)
STEP 2: difference (1673); + smaller number (3615); missing number (5288)
Missing number = 5288
44

Teacher: If the bigger number is missing in a subtraction equation, we add the other two numbers.

Teacher: Let us try:

_____ − 3615 = 1673

- Add 3615 + 1673 = 5288
- The missing number is 5288.


Example 7: 6281 − ____ = 2675
If the smaller number is missing, subtract the difference from the bigger number.
STEP 1: bigger number (6281); − missing number; difference (2675)
STEP 2: bigger number (6281); − difference (2675); missing number (3606)
Missing number = 3606
45

Teacher: Now, look at Example 7. If the smaller number is missing, we subtract the difference from the bigger number.

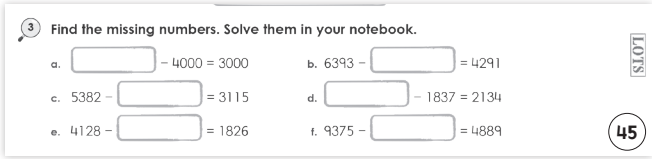
Teacher: Let us try:

6281 − _____ = 2675

MUST DO
10 MIN.

1. Subtract 6281 − 2675 = 3606
2. The missing number is 3606.

Teacher: Now, let us practise with some questions.



Teacher: Open your Main Course Book to page 45 and look at Exercise 3. Let us solve one question together before you try the rest.

Teacher: The question is:

_____ − 4000 = 3000

Teacher: What is missing here? Is it the bigger number or the smaller number?

Teacher: Yes, the bigger number is missing. When the bigger number is missing, what do we do?

Teacher: Correct, we add the other two numbers.

Teacher: Let us solve it step by step.

1. Add 4000 and 3000.
   4000 + 3000 = 7000
2. So, the missing number is 7000.

Teacher: That means 7000 − 4000 = 3000 is correct.

Teacher: Now, try solving the next questions in your notebook using the same method. If you need help, raise your hand.

You may show the **Know it Right** given on the digital platform.

SHOULD DO
10 MIN.

Doubt session

Teacher: Now, let us discuss any doubts you have.

Teacher: If you found any question difficult, let me know and we will solve it together.

Teacher: Does anyone have a different method to find the missing number?

Teacher: Great thinking. Practicing different approaches helps us understand better.

Teacher: Give yourselves a huge round of applause for your great efforts today.

Teacher: See you in the next class with more exciting learning

Differentiated Activities

110 /hr

Create three subtraction equations where the bigger number is missing and solve them. Example: _____ − 4623 = 2314

80 m/hr

Solve two subtraction equations where the smaller number is missing. Example: 7852 − _____ = 456

40 m/hr

Solve one missing number equation with direct subtraction. Example: 5200 − _____ = 3100

Home Task

Solve question (e) to (f) of Exercise 3 given on page 44 in your Main Course Book. Write the answers neatly in your notebook.

Period 6

Teacher: Good morning students, How are you?

Teacher: Let us begin with a quick mental math warm-up. Listen carefully and answer.

SHOULD DO
5 MIN.

1. I had 1500 rupees. I bought a book for 725 rupees. How much money do I have left? (1500 − 725 = 775)
2. A train had 980 passengers at the start of the journey. 465 passengers got off at the first station. How many passengers are still on the train? (980 − 465 = 515)
3. A farmer harvested 1200 apples. He sold 780 apples at the market. How many apples are left? (1200 − 780 = 420)

Teacher: Write your answers in your notebook. Now, check them as I reveal the answers.

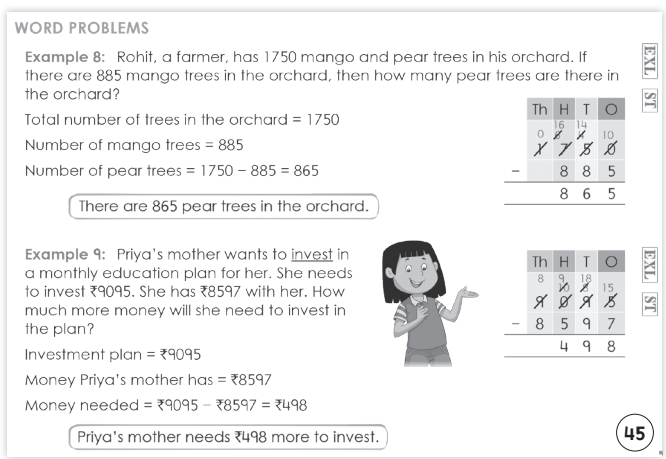
Teacher: Fantastic thinking! Now, let us use subtraction to solve some real-world problems.

Word Problems

Teacher: Open your Main Course Book to page 45 and look at example 8.

Teacher: Rohit, a farmer, has 1750 mango and pear trees in his orchard. There are 885 mango trees. How many pear trees are there?

MUST DO
10 MIN.



Teacher: To find out, we subtract:

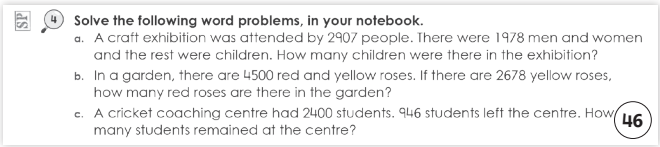
(1750 − 885 = 865)

Teacher: So, there are 865 pear trees in the orchard.

(Discuss example 9 in a similar way.)

You may show the **Quick Maths** given on the digital platform.

MUST DO
15 MIN.



Solve the following word problems, in your notebook.

a. A craft exhibition was attended by 2907 people. There were 1978 men and women and the rest were children. How many children were there in the exhibition?

b. In a garden, there are 4500 red and yellow roses. If there are 2678 yellow roses, how many red roses are there in the garden?

c. A cricket coaching centre had 2400 students. 946 students left the centre. How many students remained at the centre?

46

Teacher: Open Exercise 4 on page 46. Solve questions (a) and (b) in your notebooks.

Teacher: Read each problem carefully and decide what to subtract.

Teacher: If you need any help in solving the sums, please raise you hand.

Discovering better

MUST DO

5 MIN.

Teacher: Let us explore a new word today – invest. Look at the 'Discovering better' section in your Main Course Book.

Teacher: What do you think the word invest means?

Teacher: Yes, it means to buy something or put money into something for future benefit.

Teacher: Can you think of something people invest in? (Encourage responses like education, property, gold or savings.)

Teacher: Why do you think Priya's mother is investing in an education plan?

Teacher: Right, so Priya can have a secure future.

Teacher: Now, turn to your partner and discuss one thing you would like to invest in for your future.

COULD DO

5 MIN.

Teacher: Let us take a short break. Close your eyes, take a deep breath and stretch your arms.

Teacher: Think about one thing you enjoyed learning today.

Teacher: Now, smile at your partner and get ready to discuss your answers.

Differentiated Activities

110 km/hr

A city had 8345 people and 2678 moved away. How many are left?

80 km/hr

A poultry had 6210 eggs. It sold 4583. How many are left?

40 km/hr

A zoo had 400 animals. 245 were moved to another zoo. How many remain?

Home Task

Solve question (c) of Exercise 4 given on page 45 in your Main Course Book. Write the answers neatly in your notebook.

Period 7

Teacher: Let us begin with a fun warmup from our previous lesson on finding the missing number.

SHOULD DO

5 MIN.

Teacher: If the bigger number is missing, add the given numbers. If the smaller number is missing, subtract the difference from the bigger number.

1. _____ − 2450 = 1300 (Find the bigger number)
2. 7250 − _____ = 2890 (Find the smaller number)
3. _____ − 3785 = 2695 (Find the bigger number)
4. 9100 − _____ = 4575 (Find the smaller number)
5. _____ − 6125 = 3200 (Find the bigger number)

Teacher: Write your answers in your notebook. Let us check them together.

Teacher: Well done! Now, let us move to adding and subtracting numbers together.

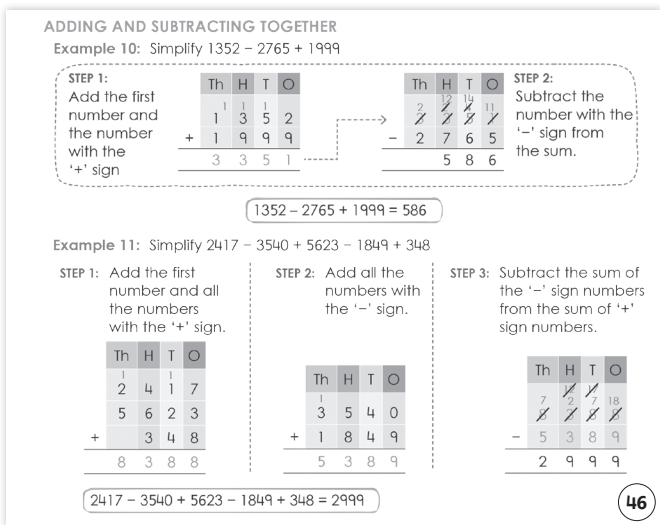
Adding And Subtracting Together

MUST DO

10 MIN.

Teacher: Open your Main Course Book to page 46 and look at Example 10.

Teacher: We have the expression 1352 − 2765 + 1999. What should we do first?



Teacher: Yes, we first add the numbers with the '+' sign. (1352 + 1999 = 3351)

Teacher: Now, we subtract the number with the '−' sign. (3351 − 2765 = 586)

Teacher: So, the final answer is (586).

Teacher: Let us look at a slightly bigger example, Example 11.

Teacher: Here, we need to simplify 2417 − 3540 + 5623 − 1849 + 348.

1. Add the numbers with the '+' sign:
   (2417 + 5623 + 348 = 8388)
2. Add the numbers with the '−' sign:
   (3540 + 1849 = 5389)
3. Subtract the sums:
   (8388 − 5389 = 2999)

Teacher: The final answer is 2999. Now, let us solve a few questions together.

Understanding better

Teacher: Turn to the 'Understanding better' section on page 46.

Teacher: Why do we add first and then subtract?

Teacher: If we do not group numbers correctly, will the answer be the same?

Teacher: Let us try a small example to check. Solve 1200 − 450 + 300 in two different ways.

MUST DO
5 MIN.

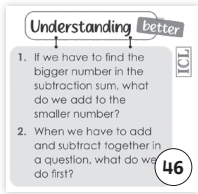
Teacher: If we subtract first:

(1200 − 450 = 750, then 750 + 300 = 1050)

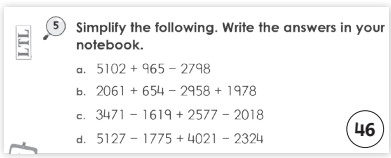
Teacher: If we add first (incorrect method):

(450 + 300 = 750, then 1200 − 750 = 450)

Teacher: See, the answers are different. That is why following the correct steps is important.


Understanding better
1. If we have to find the bigger number in the subtraction sum, what do we add to the smaller number?
2. When we have to add and subtract together in a question, what do we do first?
ICL
46

Teacher: Open Exercise 5 on page 46. Solve questions (a) to (c) in your notebooks.


LTL
5 Simplify the following. Write the answers in your notebook.
a. 5102 + 965 − 2798
b. 2061 + 654 − 2958 + 1978
c. 3471 − 1619 + 2577 − 2018
d. 5127 − 1775 + 4021 − 2324
46

MUST DO
20 MIN.

Teacher: Remember to first add the numbers with the '+' sign, then add the numbers with the '−' sign and finally subtract the two sums.

Teacher: Raise your hand if you need help

You may show the **Quiz** given on the digital platform.

Teacher: Today, we learned how to add and subtract numbers together in one equation.

Teacher: Keep practising and soon, these calculations will become easier for you.

Teacher: Give yourselves a huge round of applause for your great efforts today.

Teacher: See you in the next class.

Differentiated Activities

110 /hr

Create your own mixed addition and subtraction problem with at least four numbers and solve it.

Example: 4567 − 3124 + 6789 − 2456 = ?

80 km/hr

Solve mixed addition and subtraction problems using a step-by-step approach.

Example 1: 7250 − 4185 + 3620 = ?

40 km/hr

Solve a simple mixed operation problem with only three numbers.

Example: 5000 − 2500 + 1200 = ?

Home Task

Solve question (d) of Exercise 5 given on page 46 in your Main Course Book. Write the answers neatly in your notebook.

Period 8

Teacher: Today, we will go on a math treasure hunt. Solve each clue step by step to find the final number.

Teacher: Write your answers in your notebook as we go along.

1. Start with 50.
2. Subtract 20. (Answer: 30)
3. Add 15. (Answer: 45)
4. Subtract 10. (Answer: 35)
5. Add 5. (Final answer: 40)

SHOULD DO
5 MIN.

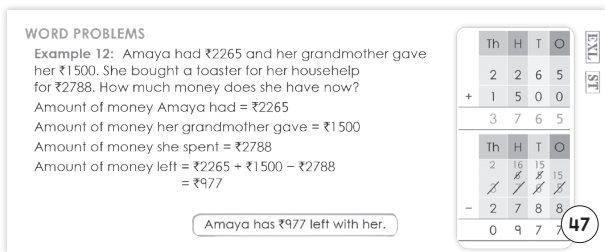
Teacher: Who got 40? Well done!

Teacher: Now, let us move on to solving word problems.

Word Problems

Teacher: Open your Main Course Book to page 45 and look at Example 12.

MUST DO
10 MIN.


WORD PROBLEMS
Example 12: Amaya had ₹2265 and her grandmother gave her ₹1500. She bought a toaster for her household for ₹2788. How much money does she have now?
Amount of money Amaya had = ₹2265
Amount of money her grandmother gave = ₹1500
Amount of money she spent = ₹2788
Amount of money left = ₹2265 + ₹1500 − ₹2788
= ₹977
Amaya has ₹977 left with her.
Th H T O
2 2 6 5
+ 1 5 0 0
3 7 6 5
Th H T O
2 16 15
2 7 8 8
− 2 7 8 8
0 9 7 7
TXT ST
47

Teacher: Amaya had ₹2265 and her grandmother gave her ₹1500. She bought a toaster for ₹2788. How much money does she have now?

Teacher: First, let us find the total money Amaya had. (₹2265 + ₹1500 = ₹3765)

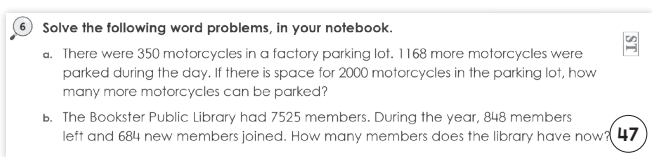
Teacher: Now, she spent ₹2788. What should we do next?

Teacher: Yes, we subtract. (₹3765 − ₹2788 = ₹977)

Teacher: So, Amaya has ₹977 left with her.

Teacher: Let us now solve a similar problem in our notebooks.

You may show the **Infographic** given on the digital platform.


6 Solve the following word problems, in your notebook.
a. There were 350 motorcycles in a factory parking lot. 1168 more motorcycles were parked during the day. If there is space for 2000 motorcycles in the parking lot, how many more motorcycles can be parked?
b. The Bookster Public Library had 7525 members. During the year, 848 members left and 684 new members joined. How many members does the library have now?
ST
47

Teacher: Open Exercise 6 on page 47. Solve question (a) in your notebooks.

MUST DO
5 MIN.

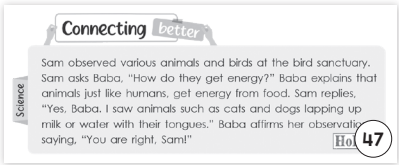
Teacher: Read the problem carefully, identify the numbers and decide whether to add or subtract.

Teacher: If you need help, raise your hand.

(Guide students to complete the question.)

Connecting better

Teacher: Look at the 'Connecting better' section. Sam is observing animals and asks how they get energy.



MUST DO
5 MIN.

Teacher: Baba explains that animals, like humans, get energy from food.

Teacher: Can you think of some examples where we observe animals eating? (Encourage answers like birds pecking at grains, cats drinking milk or cows grazing.)

Grasping better

Teacher: Now, look at the 'Grasping better' section. What is a bird sanctuary?

MUST DO
5 MIN.

Teacher: Yes, it is a safe place for birds.

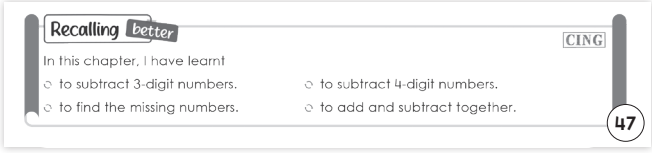
Teacher: Can you think of any bird sanctuaries in our country? (Encourage students to name well-known sanctuaries like Bharatpur Bird Sanctuary or Ranganathittu Bird Sanctuary.)

You may show the **Mental Maths** given on digital platform.

Recalling better

Teacher: Open to page 47 and read the 'Recalling better' section. Let us recall everything we have learned in this chapter. I will ask a few questions and then we will discuss the answers together.

MUST DO
10 MIN.



Teacher: How do we decide when to add and when to subtract in a word problem?

Teacher: Yes, fantastic! When we are combining amounts or finding a total, we add. When we are finding the difference between two values, we subtract.

Teacher: What is the first step when solving a subtraction problem with borrowing?

Teacher: Wonderful! First, we check if the digit in the minuend (top number) is smaller than the digit in the subtrahend (bottom number). If it is, we borrow from the next place value to make subtraction possible.

Teacher: How do we find a missing number in a subtraction equation?

Teacher: Absolutely right! If the bigger number is missing, we add the other two numbers. If the smaller number is missing, we subtract the difference from the bigger number to find the missing value.

Teacher: Why is it important to double-check subtraction answers?

Teacher: Yes, that is correct! Double-checking ensures that we avoid mistakes, especially when borrowing. If we make a mistake in borrowing, our entire answer can be incorrect.

Teacher: How does subtraction help us in real life?

Teacher: Great thinking! We use subtraction in calculating expenses, comparing amounts, measuring distances and in daily activities like finding out how much money is left after spending.

Teacher: Now, discuss these with your partner and write the answers in your notebook. This will help us remember subtraction better.

Teacher: Give yourselves a huge round of applause for your efforts today.

Teacher: See you in the next class.

Differentiated Activities

110 km/hr

A family planned a trip with a budget of ₹15,000. They spent ₹7,825 on travel and ₹3,650 on accommodation. How much money is left?

80 km/hr

A farmer harvested 9,250 apples. He sold 4,875 at the market. How many apples are left?

40 km/hr

A school had 1,500 books. It issued 275 books to students and received 125 new books. How many books are there now?

Home Task

Solve question (b) of Exercise 6 given on page 47 in your Main Course Book. Write the answers neatly in your notebook.

Period 9

Teacher: Let us begin with a fun activity called Find the Hidden Number. I will give you an incomplete subtraction equation and you have to find the missing number.

1. _____ − 15 = 8 (Find the bigger number) (Answer: 23)
2. 40 − _____ = 25 (Answer: 15)
3. _____ − 12 = 5 (Answer: 17)
4. 30 − _____ = 18 (Answer: 12)
5. _____ − 9 = 4 (Answer: 13)

SHOULD DO
5 MIN.

Teacher: Solve them in your notebook. Now, let us check the answers together.

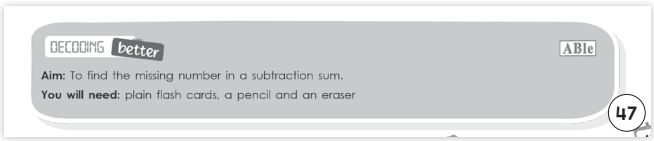
Teacher: Well done! Now, let us move to Decoding better and learn more about missing numbers in subtraction.

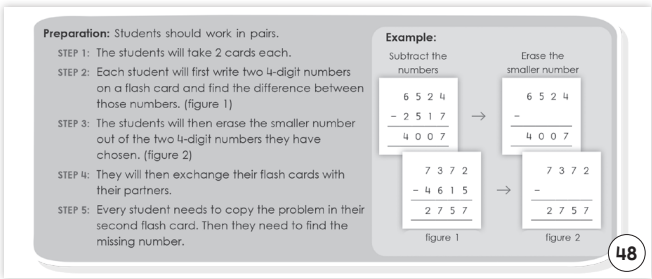
Decoding better

Teacher: Open your Main Course Book to page 47 and look at the 'Decoding better' section.

MUST DO
15 MIN.

Teacher: Sometimes, in subtraction, we do not have all the numbers. We need to find the missing number.



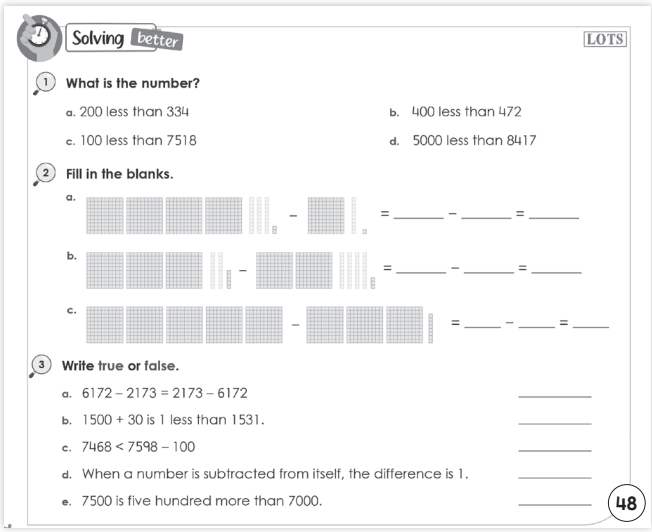


Teacher: Let us work in pairs to solve a fun activity.

Teacher: Each student will take two flashcards. Write two 4-digit numbers on a flashcard. Find the difference between them. Now, swap flashcards with a partner. Your partner must find the missing number in the subtraction sum.

Teacher: This helps us understand subtraction better. Let us begin!

Solving better



Teacher: Open 'Solving better' on page 48. Let us solve the first two exercises together.

MUST DO
10 MIN.

Teacher: In Question (1), we find the number that is less than a given number by 200, 400 or 500.

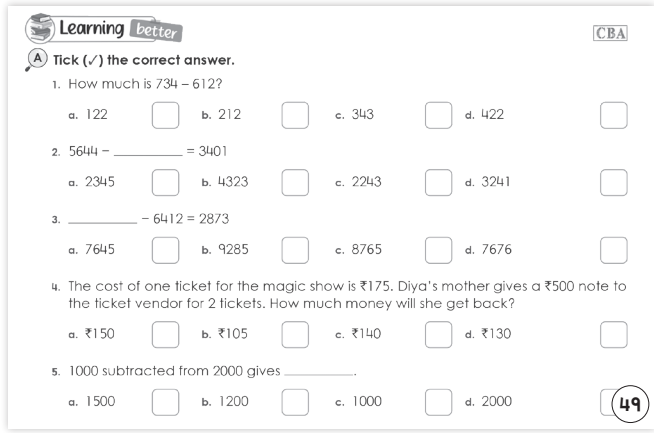
Teacher: In Question (2), we fill in the blanks using place value blocks to complete the subtraction equations.

Teacher: Solve these in your notebook. Raise your hand if you need help.

Learning better

Teacher: Open your Main Course Book to page 49 and look at the 'Learning better' section.

MUST DO
10 MIN.



Teacher: You need to tick (✓) the correct answer for each subtraction question.

Teacher: Read each question carefully and solve it step by step.

Teacher: For example, how much is 734 − 612? Solve it and choose the correct answer.

Teacher: If you need help, raise your hand. Once finished, we will discuss the answers together

Differentiated Activities

110 km/hr

Create and solve three missing number problems.

- Example: _____ − 3262 =5035

80 km/hr

Create and solve two missing number problems.

- Example: 250 − _____ = 120

40 km/hr

Solve one missing number problem aloud.

- Example: 90 − _____ = 45

Home Task

Solve question (3) of 'Solving better' given on page 48 in your Main Course Book. Write the answers neatly in your notebook.

Period 10

Teacher: Let us play a fun subtraction movement game. I will say a subtraction question. If your answer is even, jump twice. If your answer is odd, clap three times.

SHOULD DO
5 MIN.

Teacher: 250 − 126 = ? (Answer: 124, jump twice)

Teacher: 475 − 289 = ? (Answer: 186, jump twice)

Teacher: 900 − 457 = ? (Answer: 443, clap three times)

Teacher: 820 − 375 = ? (Answer: 445, clap three times)

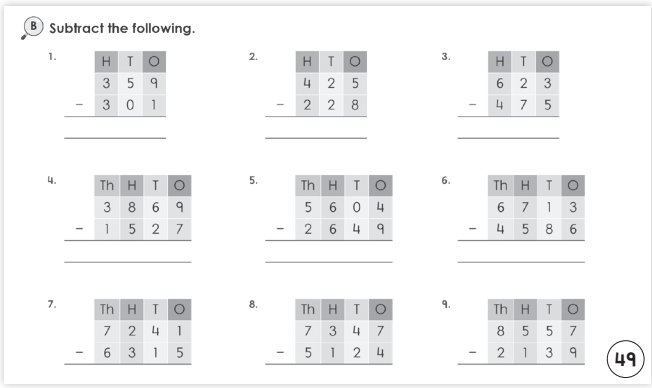
Teacher: Great work! Now, let us continue with subtraction exercises.

Learning better

Teacher: Open your Main Course Book to page 50 and look at Exercise B.

Teacher: Solve questions (1) to (4) by subtracting the given numbers carefully.

MUST DO
5 MIN.

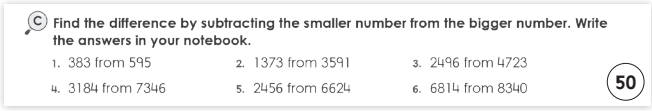

B Subtract the following.

1. H T O: 3 5 9 − 3 0 1
2. H T O: 4 2 5 − 2 2 8
3. H T O: 6 2 3 − 4 7 5
4. Th H T O: 3 8 6 9 − 1 5 2 7
5. Th H T O: 5 6 0 4 − 2 6 4 9
6. Th H T O: 6 7 1 3 − 4 5 8 6
7. Th H T O: 7 2 4 1 − 6 3 1 5
8. Th H T O: 7 3 4 7 − 5 1 2 4
9. Th H T O: 8 5 5 7 − 2 1 3 9

49

Teacher: Work with your group and check each other's answers. If someone finishes early, explain your method to your group.

MUST DO
10 MIN.


C Find the difference by subtracting the smaller number from the bigger number. Write the answers in your notebook.

1. 383 from 595
2. 1373 from 3591
3. 2496 from 4723
4. 3184 from 7346
5. 2456 from 6624
6. 6814 from 8340

50

Teacher: Now, look at Exercise C. Here, you need to subtract the smaller number from the bigger number.

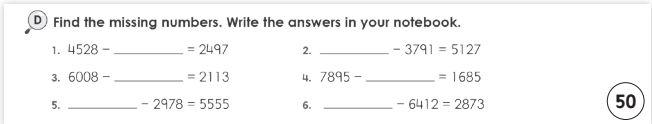
Teacher: Solve each question and write the answers in your notebook.

Teacher: Remember, always check your subtraction to avoid mistakes. Once finished, each group will share their answer with the class.

You may show the **Slideshow** given on the digital platform.

Teacher: Open Exercise D. In these questions, you will find the missing number in a subtraction equation.

MUST DO
10 MIN.


D Find the missing numbers. Write the answers in your notebook.

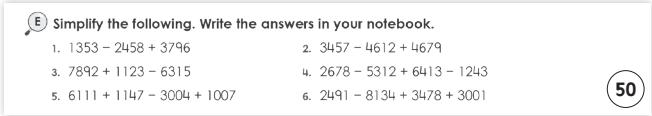
1. 4528 − _____ = 2497
2. _____ − 3791 = 5127
3. 6008 − _____ = 2113
4. 7895 − _____ = 1685
5. _____ − 2978 = 5555
6. _____ − 6412 = 2873

50

Teacher: Think carefully—if the missing number is the bigger number, you add. If the missing number is the smaller number, you subtract.

Teacher: Solve each question and double-check your answers.

MUST DO
10 MIN.


E Simplify the following. Write the answers in your notebook.

1. 1353 − 2458 + 3796
2. 3457 − 4612 + 4679
3. 7892 + 1123 − 6315
4. 2678 − 5312 + 6413 − 1243
5. 6111 + 1147 − 3004 + 1007
6. 2491 − 8134 + 3478 + 3001

50

Teacher: Now, turn to Exercise E. Here, you will simplify expressions by solving multiple operations.

Teacher: Solve step by step. First, subtract the numbers, then check your answer.

Teacher: If you finish early, recheck your work to ensure accuracy.

Teacher: Give yourselves a huge round of applause for your hard work today.

Teacher: See you in the next class.

Differentiated Activities

Form teams of four. Each student solves one step and passes the problem to the next teammate. The last student checks and writes the final answer.

110 km/hr

A shop had 8542 toys. Sold 3675 on Monday and 1523 on Tuesday. How many left?

80 km/hr

Solve 4738 − 2956, passing after each place value.

40 km/hr

Solve 92 − 47, passing after each place value.

Home Task

Solve questions (5) to (8) of Exercise B given on page 50 in your Main Course Book. Write the answers neatly in your notebook.

Bring materials for the 'Creating better' activity making a Lassi in the next class (curd, sugar, water, spoon and cardamom).

Period 11

Teacher: Let us begin with a fun subtraction hunt. I will say a subtraction equation and you must quickly find the answer in your book or write it down.

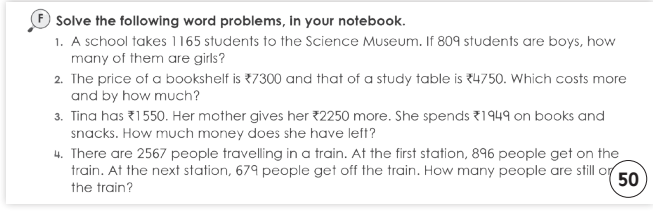
1. 516 − 100 = ? (Answer: 416)
2. 615 − 200 = ? (Answer: 415)
3. 350 + 50 = ? (Answer: 400)
4. 816 − 200 = ? (Answer: 616)

SHOULD DO
5 MIN.

Teacher: Great! Now, let us move to our exercises.

Teacher: Open your Main Course Book to page 50 and look at Exercise F. We will solve it in groups. Each group will work together to complete their assigned questions.

MUST DO
10 MIN.


F Solve the following word problems, in your notebook.

1. A school takes 1165 students to the Science Museum. If 809 students are boys, how many of them are girls?
2. The price of a bookshelf is ₹7300 and that of a study table is ₹4750. Which costs more and by how much?
3. Tina has ₹1550. Her mother gives her ₹2250 more. She spends ₹1949 on books and snacks. How much money does she have left?
4. There are 2567 people travelling in a train. At the first station, 896 people get on the train. At the next station, 679 people get off the train. How many people are still on the train?

50

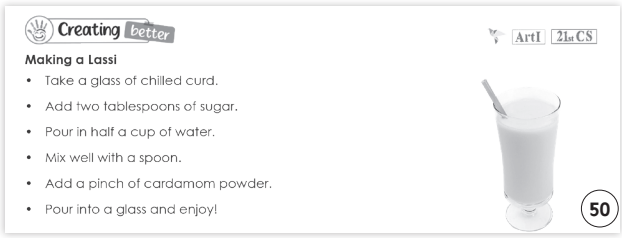
Teacher: Discuss within your group, solve the problem and cross-check answers before writing them in your notebooks.

Creating better

Making a Lassi

Teacher: Now, let us learn how to make lassi by following simple steps. Cooking involves measurement and subtraction, just like math!

MUST DO
10 MIN.



Teacher: What ingredients do we need? (Encourage students to answer.)

(Guide learners to complete the activity.)

Thinking better

You may show the **HOTS** given on the digital platform.

MUST DO
5 MIN.

Teacher: Turn to the 'Thinking better' section on page 50. This exercise helps us recognise equal values in different forms.

Teacher: Match the numbers that are equal. Solve them carefully before drawing lines.

Teacher: Why is it useful to know different forms of numbers? (Encourage students to discuss real-life examples like money and measurements.)

Choosing better

Teacher: Tom's sister, Myra, wants to pluck a flower at the Red Fort. What is the best way to stop her?

MUST DO
5 MIN.

Teacher: Should Tom explain why flowers should not be plucked or should he complain about her?

Teacher: Think about why we should protect plants. Discuss with your partner and write the best response in your notebook.

Teacher: After writing, we will discuss as a class. Some students will share their answers.

Pledging better

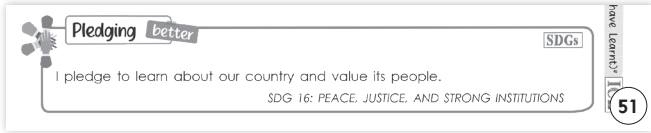
Teacher: Now, let us take a pledge together.

Teacher: Repeat after me:

'I pledge to learn about my country and value its people.'

Teacher: Why is it important to respect nature and our surroundings? (Encourage discussion on responsibility and caring for the environment.)

MUST DO
5 MIN.



Teacher: Keep thinking, solving and making connections to real life. Give yourselves a huge round of applause for your enthusiasm today.

Teacher: See you in the next class.

Differentiated Activities

110 /hr

Create and solve a word problem related to making a recipe using subtraction. Example: A chef has 500 grams of sugar. He uses 275 grams. How much is left?

80 m/hr

Write three subtraction based matching pairs and solve them. Example: 920 − 200 = ?, 620 + 100 = ?

40 m/hr

Complete three subtraction sentences by filling in the missing number. Example: 500 − _____ = 320, 900 − _____ = 650, 700 − _____ = 400

Home Task

Revising better

In this chapter, you have learnt about subtracting 3- and 4-digit numbers. Using this concept, frame 5 word problems and solve them in your Little Book.

Period 12

Teacher: Let us play a True or False Relay. I will say a subtraction statement. If you think it is true, clap twice. If you think it is false, stand up.

1. 48 − 48 = 1 (False, stand up)
2. 25 − 0 = 25 (True, clap twice)
3. 257 − 1 = 256 (True, clap twice)
4. 199 − 0 = 199 (True, clap twice)
5. 4514 − 1 = 4514 (False, stand up)

SHOULD DO
5 MIN.

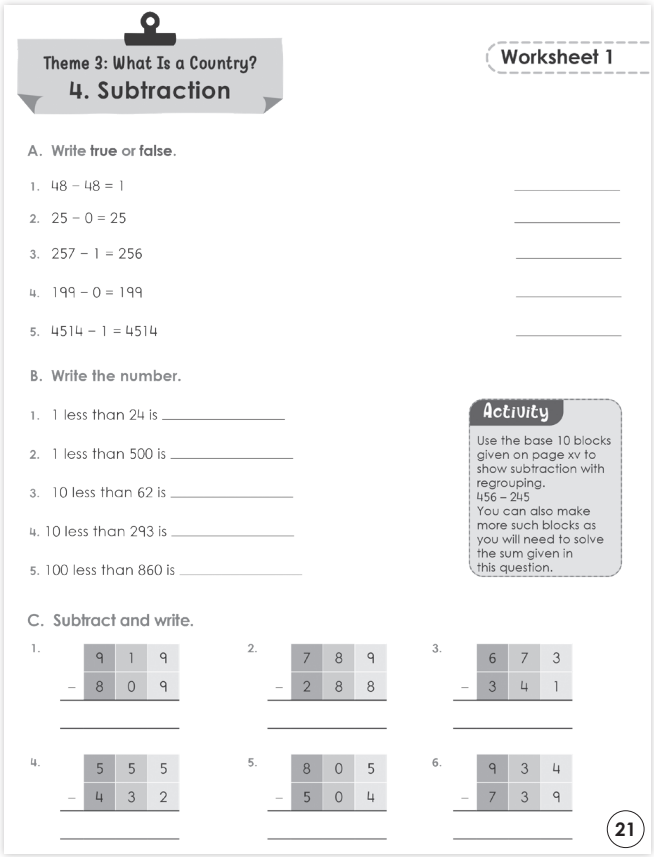
Teacher: Well done! Now, let us move on to our worksheet.

Worksheet 1

Teacher: Open your Workbook to page 21 and complete all questions in Worksheet 1.

MUST DO
20 MIN.

Teacher: Exercise A is True or False. Read carefully before answering.



Theme 3: What Is a Country?
4. Subtraction

Worksheet 1

A. Write true or false.

1. 48 − 48 = 1 _____
2. 25 − 0 = 25 _____
3. 257 − 1 = 256 _____
4. 199 − 0 = 199 _____
5. 4514 − 1 = 4514 _____

B. Write the number.

1. 1 less than 24 is _____
2. 1 less than 500 is _____
3. 10 less than 62 is _____
4. 10 less than 293 is _____
5. 100 less than 860 is _____

Activity
Use the base 10 blocks given on page xv to show subtraction with regrouping.
456 – 245
You can also make more such blocks as you will need to solve the sum given in this question.

C. Subtract and write.

1. 919 − 809 = _____
2. 789 − 288 = _____
3. 673 − 341 = _____
4. 555 − 432 = _____
5. 805 − 504 = _____
6. 934 − 739 = _____

21

Teacher: Exercise B requires you to write the missing number. Think about whether you need to subtract 1, 10 or 100.

(Guide the students to complete the activity given in the worksheet.)

Teacher: In Exercise C, solve the questions by subtracting the numbers step by step.

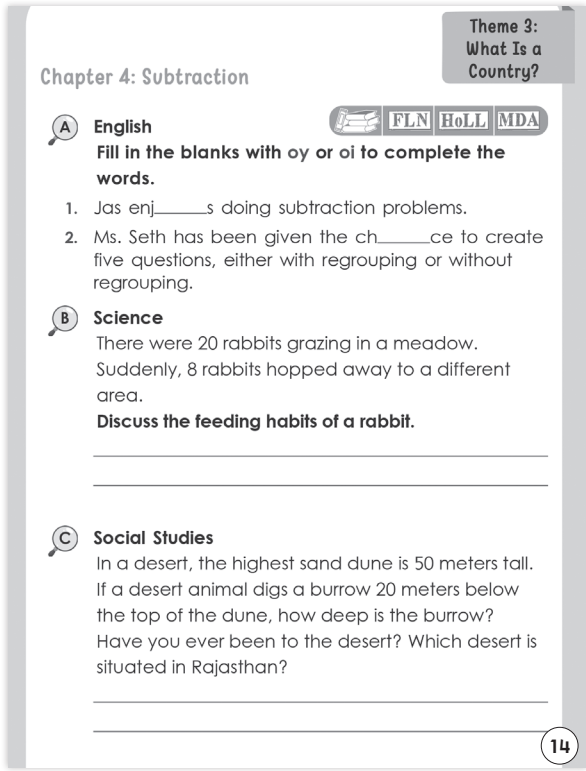
Teacher: If you finish early, check your answers carefully.

(You may show the answers on the screen.)

Book of Holistic Teaching

(Refer to the Book of Holistic Teaching, page 14 under the title 'Subtraction.' Complete the activities mentioned in this section and ensure that the students complete them. These activities are designed to enhance their holistic understanding and engagement with the topic. Provide any necessary support and materials to help the students successfully finish the activities.)

COULD DO
10 MIN.



Theme 3: What Is a Country?

Chapter 4: Subtraction

FLN HoLL MDA

A. English

Fill in the blanks with oy or oi to complete the words.

1. Jas enj_____s doing subtraction problems.
2. Ms. Seth has been given the ch_____ce to create five questions, either with regrouping or without regrouping.

B. Science

There were 20 rabbits grazing in a meadow. Suddenly, 8 rabbits hopped away to a different area.

Discuss the feeding habits of a rabbit.

C. Social Studies

In a desert, the highest sand dune is 50 meters tall. If a desert animal digs a burrow 20 meters below the top of the dune, how deep is the burrow?

Have you ever been to the desert? Which desert is situated in Rajasthan?

14

You may show the **Infographic** given on the digital platform.

Doubt session

Teacher: If you had difficulty with any subtraction question today, raise your hand.

SHOULD DO
5 MIN.

Teacher: I will explain any doubts and your classmates can also help.

Teacher: Let us make sure we understand subtraction before we move forward.

Teacher: Give yourselves a huge round of applause for your hard work today. See you in the next class.

Differentiated Activities

110 /hr

Create and solve two subtraction word problems based on real-life situations.

Example: A fruit vendor had 780 oranges. He sold 425. How many oranges are left?

80 m/hr

Solve a subtraction riddle.

Example: I am a number. When you subtract 250 from me, you get 600. What number am I?

(Answer: 850) Create one similar riddle and solve it.

40 m/hr

Arrange subtraction problems in the correct order to complete a pattern.

Example: 900 − 50 = ? → ? − 100 = ? → ? − 150 = 500.

Find the missing numbers in the sequence.

Home Task

Create a project on subtraction by following the given instruction: Take paper Pencils and small objects (like buttons or beans). Use buttons, beans, or similar items. Start with 20 objects and remove 5. How many objects are left? Write down the subtraction sentence: Example: 20 – 5 = 15. Show the starting and remaining objects. Write about your subtraction problem and answer. Describe the steps and results in words. Be ready to present you project in the next class.

Period 13

Teacher: Let us start with a quick subtraction challenge. I will say a number and you must subtract 1 from it as fast as you can.

SHOULD DO
5 MIN.

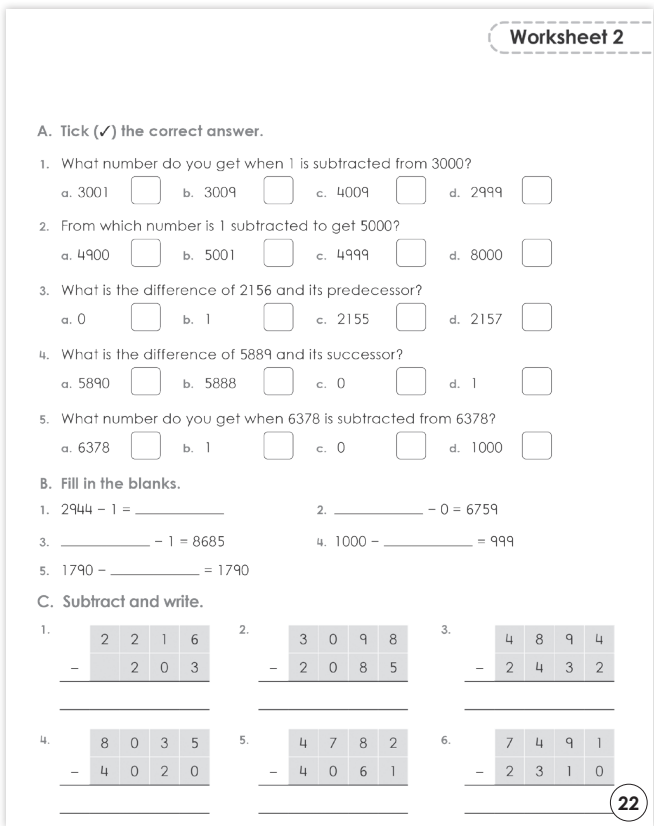
1. 3000 − 1 = ? (Answer: 2999)
2. 5000 − 1 = ? (Answer: 4999)
3. 2156 − 1 = ? (Answer: 2155)
4. 5889 −1 = ? (Answer: 5888)
5. 6378 − 6378 = ? (Answer: 0)

Teacher: Fantastic! Now, let us move on to our worksheet.

Worksheet 2

Teacher: Open your Workbook to page 22 and complete all questions in Worksheet 2.

MUST DO
20 MIN.



Worksheet 2

A. Tick (✓) the correct answer.

1. What number do you get when 1 is subtracted from 3000?
   a. 3001 ☐ b. 3009 ☐ c. 4009 ☐ d. 2999 ☐
2. From which number is 1 subtracted to get 5000?
   a. 4900 ☐ b. 5001 ☐ c. 4999 ☐ d. 8000 ☐
3. What is the difference of 2156 and its predecessor?
   a. 0 ☐ b. 1 ☐ c. 2155 ☐ d. 2157 ☐
4. What is the difference of 5889 and its successor?
   a. 5890 ☐ b. 5888 ☐ c. 0 ☐ d. 1 ☐
5. What number do you get when 6378 is subtracted from 6378?
   a. 6378 ☐ b. 1 ☐ c. 0 ☐ d. 1000 ☐

B. Fill in the blanks.

1. 2944 − 1 = _____
2. _____ − 0 = 6759
3. _____ − 1 = 8685
4. 1000 − _____ = 999
5. 1790 − _____ = 1790

C. Subtract and write.

1. 2216 − 203 = _____
2. 3098 − 2085 = _____
3. 4894 − 2432 = _____
4. 8035 − 4020 = _____
5. 4782 − 4061 = _____
6. 7491 − 2310 = _____

22

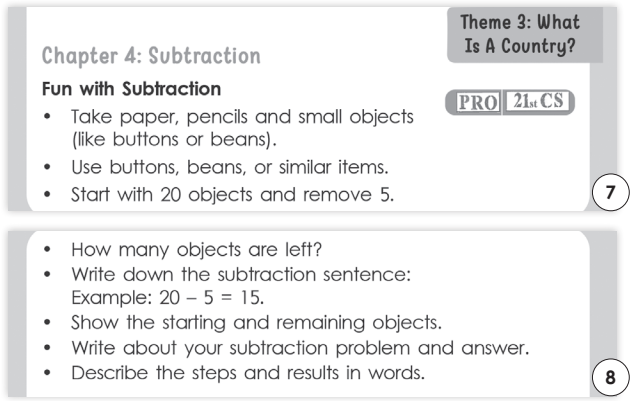
Teacher: Exercise A: Tick the correct answers after carefully reading each subtraction question.

Teacher: Exercise B: Fill in the blanks by solving the missing number in subtraction.

Teacher: Exercise C: Solve and write the subtraction problems step by step.

COULD DO
10 MIN.

Teacher: Work carefully and if you finish early, recheck your answers.



Theme 3: What Is A Country?

Chapter 4: Subtraction

Fun with Subtraction

PRO 21st CS

- Take paper, pencils and small objects (like buttons or beans).
- Use buttons, beans, or similar items.
- Start with 20 objects and remove 5.

7

- How many objects are left?
- Write down the subtraction sentence: Example: 20 – 5 = 15.
- Show the starting and remaining objects.
- Write about your subtraction problem and answer.
- Describe the steps and results in words.

8

(For project Ideas, please refer to the book of Project Ideas, page 7,8 under the title 'Subtraction' Ask students to present their project. Ensure that the students understand the project requirements and provide any necessary guidance or materials they might need. Encourage them to explore and learn about subtraction through this engaging project.)

Teacher: Now, let us fill in the last column of the KWL chart.

Teacher: In this column we will write what we have learned in this chapter.

Teacher: Think about the topics, have we learnt and write them in the 'L' column of the chart.

SHOULD DO
5 MIN.

(Wait for students to fill in the chart.)

Teacher: Let us all give a huge round of applause to everyone for their hard work and creativity. Great work, everyone. See you in the next class. Have a wonderful day ahead.

Differentiated Activities

110 /hr

Create and solve a subtraction problem related to travel. Example: A train journey is 8850 km. After traveling 3465 km, how much distance is left?

80 m/hr

Fill in the missing numbers in subtraction equations. Example: _____ − 2785 = 4320; 9000 − _____ = 3456; 6250 − 2450 = _____

40 m/hr

Arrange a set of subtraction problems in descending order based on their differences. Example: 7850 − 4620; 9300 − 2150; 6020 − 3450 (Solve and arrange from largest to smallest difference).

Home Task

Practise the concepts discussed in the class.

Learning Outcomes

The students will:

Domain	Development Area
Physical Development	• demonstrate the ability to write and solve subtraction problems neatly using correct number formation. • use hands-on materials like counters and number lines to physically model subtraction.
Socio-Emotional and Ethical Development	• work collaboratively in pairs or groups to solve subtraction-based real-life problems. • exhibit patience and perseverance when faced with challenging subtraction problems, seeking help when needed.
Cognitive Development	• solve subtraction problems up to three-digit numbers with and without regrouping with accuracy. • apply subtraction strategies like breaking apart numbers and using number lines in different real-life situations. • identify and explain patterns in subtraction like subtracting 9 is the same as subtracting 10 and adding 1.
Language and Literacy Development	• read and interpret word problems involving subtraction, identifying the minuend, subtrahend, and difference correctly. • use mathematical terms related to subtraction like take away, left, and difference in discussions and written explanations.
Aesthetic and Cultural Development	• create and explain pictorial representations like bar models or objects of a subtraction problem. • relate subtraction concepts to cultural or real-life contexts.
Positive Learning Habits	• check and verify subtraction solutions with accuracy. • attempt different subtraction strategies and choose the most efficient one. • complete a given subtraction task within a specified time limit, demonstrating focus and self-discipline.

Starry Knights

Has it been an easy task teaching subtraction to the young learners?/Why/not?

Give yourself a STAR for being a fabulous teacher!!

Lesson-5: Geometry and Patterns

12 Periods (40 minutes each)

Learn Better (Main Course Book), Stay Ahead (Workbook), Book of Holistic Teaching, Book of Project Ideas, CRM signs, Poster, Blackboard

Animation, Animated Activities, Dictionary, eBook, Explainer Video, HOTS, I Explain, Infographic, Know it Right, Mental Maths, Quick Maths, Quiz, Slideshow

Confirming better
I learn new things every day.

Curricular Goals and Objectives (NCF)

To enable the students:

- to recognise, classify, and analyse 2D and 3D shapes and their properties.
- to develop logical reasoning through patterns and spatial relationships.
- to apply geometric concepts in real-life contexts.
- to express creativity through designing and constructing patterns.
- to communicate mathematical ideas using correct terminology and visuals.
- to engage in hands-on learning with measurement and construction.

Methodology

Period 1

SHOULD DO
5 MIN.

Teacher: Good morning students, How are you?

Teacher: Let us play a quick guessing game. I will describe a shape and you have to guess it.

Teacher: It has three sides and three corners. What is it?

Teacher: Yes, a triangle.

Teacher: It has four equal sides. What is it?

Teacher: A square, correct.

Teacher: It has no straight lines, just one continuous curve. What is it?

Teacher: A circle, well done.

Teacher: Now, look around the classroom. Can you spot these shapes?

Teacher: The board is a rectangular, the clock is circular and the windows are in the shape of square. Great observations.

Teacher: We have identified different shapes. Now, everybody look at the 'Confirming better' section given on page 52 in your Main Course Book.

Confirming better

Teacher: The statement in this section says, 'I learn new things every day.'

MUST DO
5 MIN.

Teacher: Every day, we learn something new. What is something new you learned recently?

Teacher: It could be a new word, a fact about nature or something fun you tried.

Teacher: Let us connect this to our lesson. Today, I will share an interesting fact about shapes.

Teacher: Did you know that a wheel is always circular in shape?

Teacher: Why do you think vehicles have circular wheels and not square ones?

Teacher: A circular face object rolls smoothly in all directions, while a square or rectangular face object would make the ride bumpy.

Teacher: Can you think of other objects that in be circular to work properly?

Teacher: A coin, a clock and a bottle cap are all circular because they need smooth edges.

Teacher: Learning new things helps us see the world in a different way.

Teacher: We will begin a new chapter, Geometry and Patterns. We are going to use a KWL chart to help us organise our thoughts and learning. I have made a KWL format on the blackboard. Please take out your notebooks and draw the same format in your notebooks.

SHOULD DO
10 MIN.

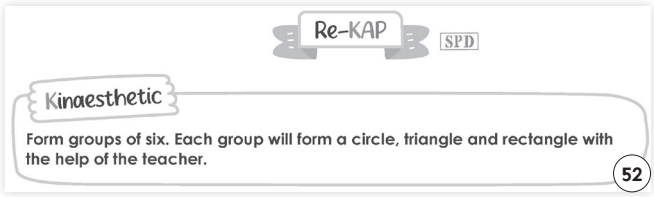
K	W	L

Teacher: Take a few minutes to think and write. If you have any questions, feel free to ask.

Teacher: You all did an amazing work in this activity. Let us move to Re-KAP activities. We will do Kinaesthetic, Auditory and Pictorial activities today to make our learning exciting. Let us start with the Kinaesthetic activity.

MUST DO
10 MIN.

Kinaesthetic



Teacher: Open your books to page 52.

Teacher: Let us read and understand the kinaesthetic activity.

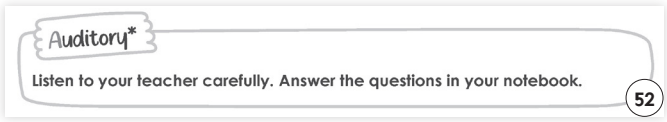
Teacher: Work in groups of six to complete the task as instructed in the book.

(Guide students to form different shapes.)

Teacher: Excellent teamwork, Let us proceed to the auditory activity.

You may show the **eBook** given on digital platform.

Auditory



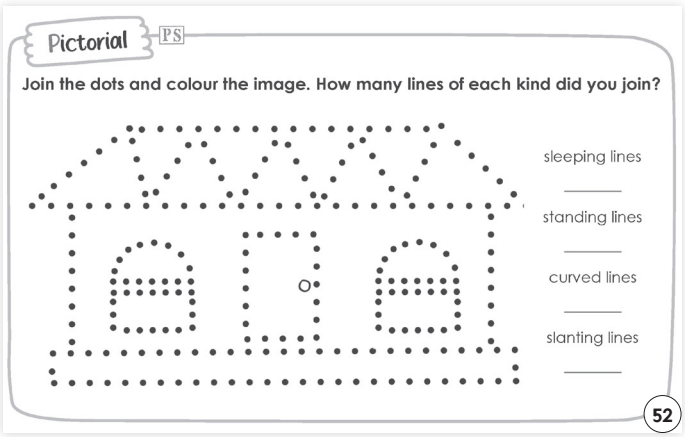
MUST DO
5 MIN.

Teacher: Listen carefully as I read the questions aloud. Think and answer.

Teacher: I am a shape with a flat and round base. I have one pointy top. You see me with ice cream or as a party hat. What shape am I?

Teacher: Great effort, everyone! Now, let us explore the pictorial activity.

Pictorial



Teacher: Look at the picture given on page 52. There is a picture made up of dots.

MUST DO
5 MIN.

Teacher: Join the dots to complete the activity.

Teacher: You all did great work today. We identified shapes, created patterns and formed shapes using our bodies.

Teacher: Let us end with a big round of applause for everyone's effort.

Differentiated Activities

110 km/hr

Write your name in capital letters and identify the types of lines used in each letter. Explain why certain letters have more straight lines while others have curves.

80 km/hr

Write your name in large letters and highlight the standing, slanting and curved lines. Use different colours for different types of lines.

40 km/hr

Trace over your name with different colours, then circle the straight and curved lines separately.

Home Task

Look around your home and find five objects of different shapes. Draw them in your notebook and label each shape.

Period 2

Teacher: I will draw a simple design on the board. You have 10 seconds to observe it carefully.

SHOULD DO
5 MIN.

(Draw a pattern using lines and shapes, such as a simple tile design.)

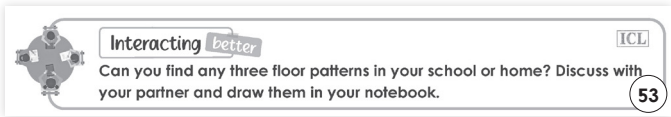
Teacher: Now, close your eyes and try to describe what you saw.

Teacher: What shapes were in the design? Were there straight lines or curved lines?

Teacher: Now, open your eyes and check if your description was correct.

Teacher: This activity shows how patterns and geometry are connected. Let us explore this further.

Interacting better



Teacher: Look at the 'Interacting Better' section in your book.

SHOULD DO
5 MIN.

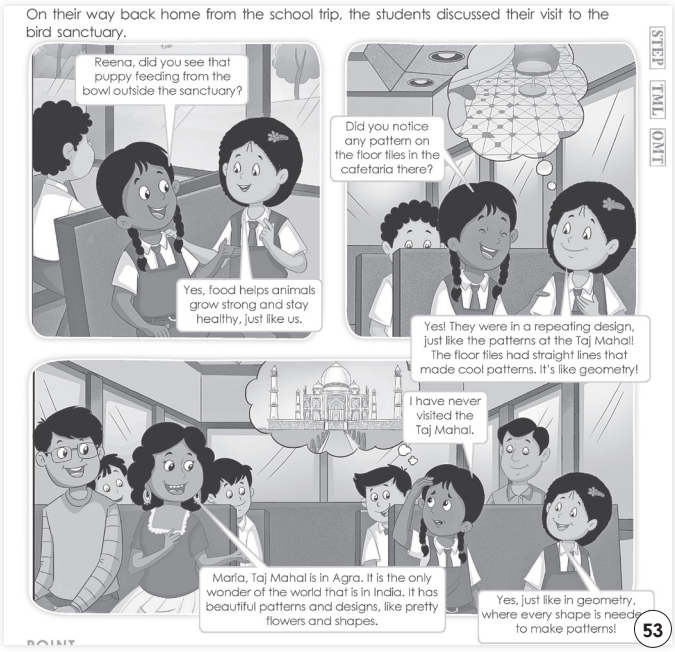
Teacher: The question asks if you can find any three floor patterns in your school or home.

Teacher: Let us discuss in pairs. Think about the patterns you have seen on tiles, carpets or walls.

Teacher: Now, draw at least one pattern in your notebook.

Teacher: Did you notice that many patterns are made up of lines, shapes and points? These are the basic building blocks of geometry.

Teacher: Now, let us listen to a story about geometry in real life.



You may show the **Animation** given on the digital platform.

Teacher: Turn to the page 53 and look at the comic-style conversation in your book.

MUST DO
20 MIN.

Teacher: The students in the story are discussing their visit to the bird sanctuary. Who would like to read?

(Encourage students to read and explain the conversation.)

Teacher: One student talked about the floor tiles in the cafeteria. What did they observe?

Teacher: The patterns on the floor tiles follow a repeating design, just like the ones at the Taj Mahal.

Teacher: Have any of you visited the Taj Mahal? What do you know about it?

Teacher: The Taj Mahal is famous for its geometric design and symmetry.

Teacher: Just like in nature, geometry is used in buildings to create balance and beauty.

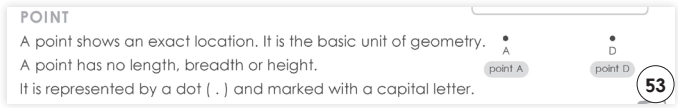
Teacher: Now, let us look deeper into the basic elements of geometry—points and lines.

You may show the **Dictionary** given on digital platform.

Teacher: Now, we will explore some new words that are important for this chapter. Let us go through the words given in the dictionary section on the digital platform.

(Explain the words mentioned in the dictionary section on the digital platform. Or write it down on the blackboard and explain it to the students)

Point



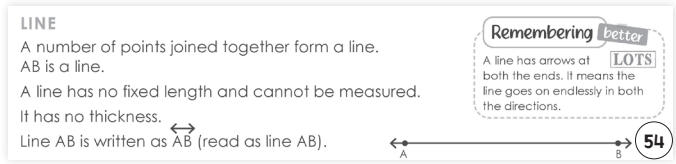
Teacher: A point is a small dot that marks a location. It does not have size, length or width.

MUST DO
5 MIN.

Teacher: Think of a star in the sky. It is just a point in space.

(Discuss with the reference given on page 53 in Main Course Book.)

Line



Teacher: A line is a collection of points joined together.

Teacher: Unlike a point, a line extends in both directions without an end.

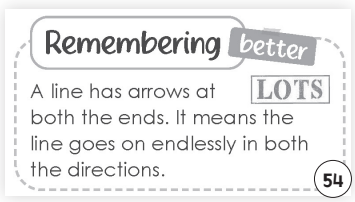
Teacher: Imagine a railway track. The rails go on and on, just like a line in geometry.

Teacher: Can you find any examples of points and lines around you?

Teacher: Now, let us revise and remember better.

(Discuss with the reference given on page 54 in Main Course Book.)

Remembering better



Teacher: Look at the 'Remembering better' section in your book.

MUST DO
5 MIN.

Teacher: A line has no fixed length and goes in both directions endlessly.

Teacher: Think about a rope. If we stretch it far enough, it can keep going in both directions like a line.

Teacher: Now, let us reflect. Why do you think learning about lines and points is important in real life?

Teacher: Architects, designers and even artists use these basic concepts to create buildings, roads and art.

Teacher: Now, let us all clap together in a pattern. Clap, clap, stomp. Clap, clap, stomp.

Teacher: Repeat after me. Clap, stomp, clap, stomp.

Teacher: Wonderful. Patterns are everywhere, even in the way we clap.

Teacher: Let us end with a big round of applause for everyone's effort today.

Differentiated Activities

110 km/hr

Create a floor design using different types of lines (standing, sleeping, slanting and curved). Label the types of lines used.

80 km/hr

Draw a pattern using basic shapes and lines. Identify the number of straight and curved lines in your design.

40 km/hr

Create a simple pattern using straight and curved lines. Identify and count the types of lines in the pattern.

Home Task

Look around your home and find three different objects that have lines in their design. Draw them in your notebook and label the types of lines used (straight, slanting, curved).

Period 3

Teacher: Good morning, students. Today, let us begin with a quick observation activity.

SHOULD DO

5 MIN.

Teacher: Look around the classroom. Can you find objects that have straight edges?

Teacher: Now, look again. Can you find objects with curved edges?

Teacher: A book, the edge of the board or a ruler all have straight edges, while a round table or a clock have curved edges.

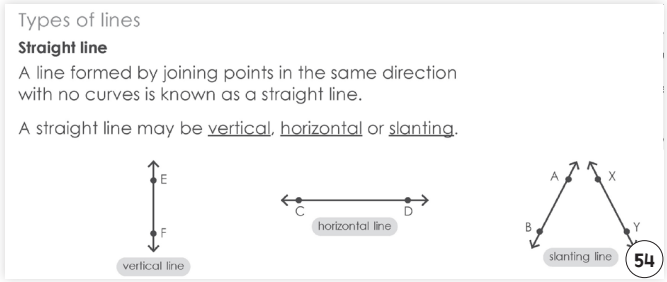
Teacher: Today, we will explore different types of lines in more detail.

MUST DO

15 MIN.

Types of Lines

Straight line



Teacher: A straight line is formed by joining points in the same direction with no curves.

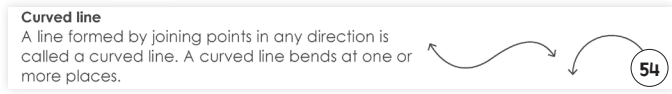
Teacher: Let us experiment. Take a ruler and place it on your notebook. Use a pencil to draw along its edge. What do you get?

Teacher: A straight line can be of three types:

- Vertical line – like the trunk of a tree or a lamp post.
- Horizontal line – like the top of a table or the horizon where the sky meets the sea.
- Slanting line – like the legs of a ladder or a slide in a playground.

Teacher: Now, look around and point at any straight lines you can find.

Curved line



Teacher: A curved line is formed by joining points in any direction except straight. Unlike straight lines, curved lines bend at one or more places.

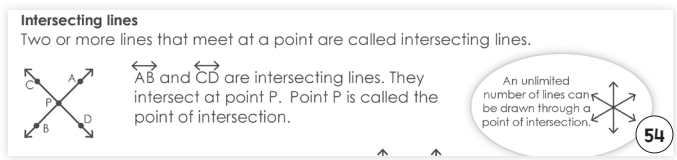
Teacher: Look at the example in your book—the curved line does not follow one direction but bends smoothly.

Teacher: Some real life examples that have curved lines are:

- A rainbow in the sky.
- A snake's movement when it slithers.
- The rim of a bowl or the handle of a cup.

Teacher: Now, trace a curved line in the air with your hand.

Intersecting lines



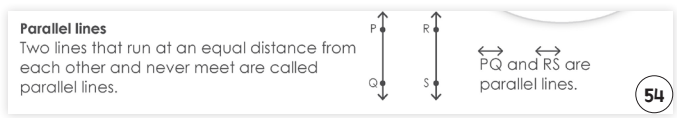
Teacher: Now, let us learn about intersecting lines. Two lines that cross each other at a point are called intersecting lines.

Teacher: Hold two pencils so they touch at a point. That point is called the 'point of intersection'.

Teacher: Look at the letter 'X'. The two slanting lines cross each other at a point. That is an example of intersecting lines.

Teacher: Can you think of real-life examples? Roads crossing each other or scissors opening and closing are examples of intersecting lines.

Parallel lines



Teacher: Now, let us look at parallel lines.

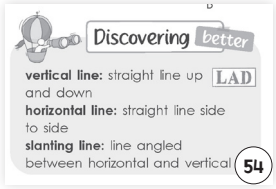
Teacher: Two lines that run at an equal distance from each other and never meet are called parallel lines.

Teacher: Look at the railway tracks. No matter how long they go, they never touch.

Teacher: Let us try another activity. Take two rulers and place them side by side, keeping an equal gap between them. They are parallel.

Teacher: Can you think of more examples? The edges of a notebook, the bars of a window grill and the zebra crossing on a road all have parallel lines.

Discovering better



Teacher: Open page 54 and look at the 'Discovering better' section. Today, we will discuss different types of straight lines.

MUST DO
5 MIN.

Teacher: First, let us look at the vertical line. It is a straight line that moves up and down.

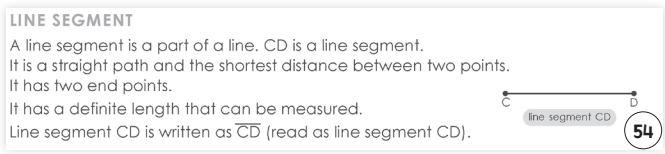
Teacher: Can you point to something in the classroom that has a vertical line?

(Students respond: The legs of a chair, a doorframe, a standing ruler.)

Teacher: That is correct. The vertical line stands tall, just like trees or poles.

(Discuss other lines in similar way.)

Line Segment



Teacher: Now, let us learn about line segments and rays.

MUST DO
5 MIN.

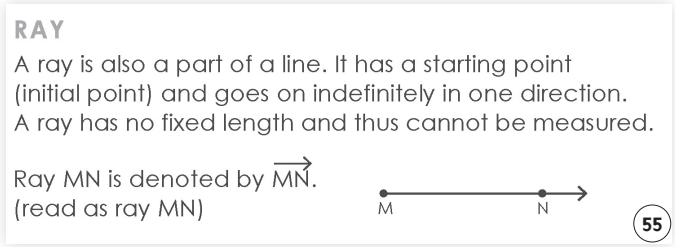
Teacher: A line segment is a part of a line. It has two fixed endpoints and a definite length.

Teacher: Imagine a pencil. If you hold it from end to end, it is like a line segment because it has a beginning and an end.

Teacher: Now, take your notebook and draw a straight line using a ruler. Mark two points on it and label them A and B. The part of the line between A and B is a line segment.

Ray

Teacher: A ray starts at one point and goes on endlessly in one direction.

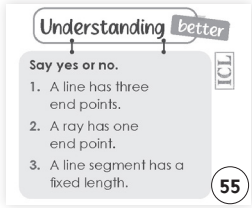


Teacher: Can you think of real-life examples?

- A sunray that originates from the sun and travels outward.
- A torchlight beam that shines and spreads in one direction.

Teacher: Now, take your pencil. Place one end on your notebook and imagine the other end stretching far away. That is how a ray moves.

Understanding better



Teacher: Open page 55 and look at the 'Understanding better' section.

MUST DO
5 MIN.

Teacher: This section has three statements. Listen carefully and answer with 'yes' or 'no'.

1. A line has three endpoints. (Students respond: No.)
2. A ray has one endpoint. (Students respond: Yes.)
3. A line segment has a fixed length. (Students respond: Yes.)

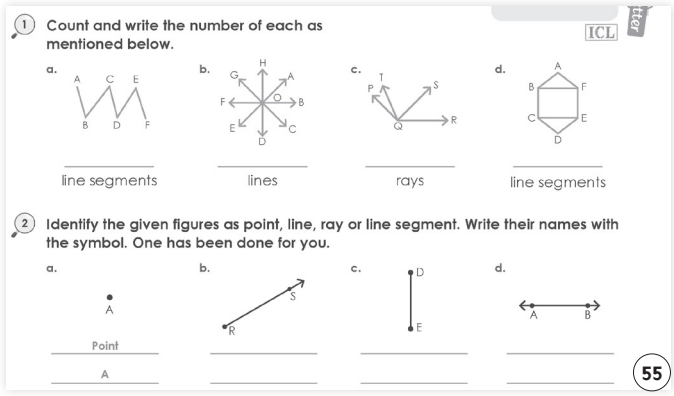
Teacher: Well done. Now, let us discuss each answer.

Teacher: A line extends endlessly in both directions. That means it has no endpoints, not three.

Teacher: A ray starts at one point and goes endlessly in one direction, so it has only one endpoint.

Teacher: A line segment is a fixed part of a line, so it has a definite length.

Teacher: Now, turn to your notebook and write down these statements. Mark each one as 'yes' or 'no'.



Teacher: Everyone please open page 55 and read Exercise 1.

MUST DO 5 MIN.

Teacher: Look at the figure given in question (a). How many line segments do you see?

Teacher: Write the total number of line segments in your notebook.

(Guide learners to complete the next question in a similar way.)

Teacher: Let us move to the next Exercise 2. Here you have to identify the figure.

Teacher: Complete questions (a) and (b) of Exercise 2.

Teacher: If you have completed your questions, discuss your answers with your partner.

Teacher: Well done. Let us give ourselves a big round of applause for today's learning.

Differentiated Activities

110 km/hr

Draw five different objects from your surroundings and identify the types of lines present in them. Label each line as straight, curved, parallel, intersecting or part of a line segment.

80 km/hr

Find three objects around you that have straight or curved lines. Draw them and write whether they have straight, curved or both types of lines.

40 km/hr

Use pencils or cut paper strips to create different types of lines (straight, curved, slanting, parallel and intersecting). Arrange them on your desk.

Home Task

Solve questions (c) and (d) of Exercises 1 and 2 given on page 55 in Main Course Book.

Period 4

SHOULD DO 5 MIN.

Teacher: Good morning, everyone. How are you today?

Teacher: Today, let us begin with a fun movement activity. I will say a type of line and you will show it using your hands or arms.

- Straight line – Stretch both arms straight forward.
- Curved line – Move one arm in a wavy motion.
- Intersecting lines – Cross both arms like an X.
- Parallel lines – Hold both arms straight and apart.

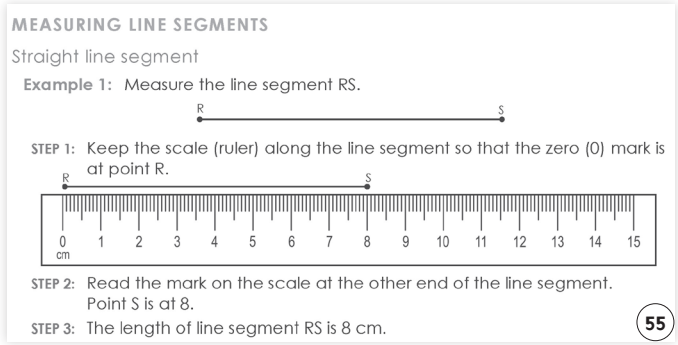
Teacher: That was great. Now, open your Main Course Book to page 55. Let us learn about measuring line segments.

Measuring Line Segments

Straight line segment

MUST DO 5 MIN.

Teacher: Look at Example 1 in your book. A straight line segment is measured using a scale. Let us read the steps.



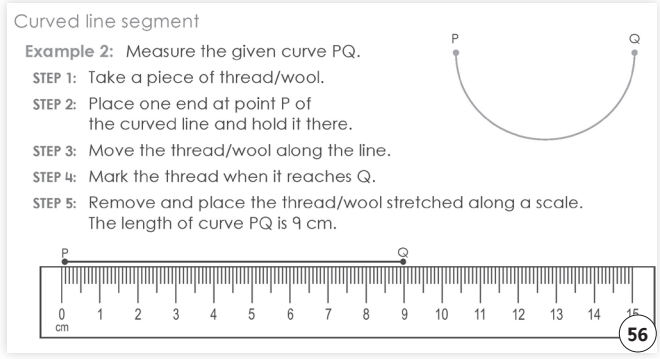
(Read and discuss the steps.)

Teacher: Now, let us try measuring a line segment on the board. If I start at 0 and the other end is at 8, what is the length of the segment?

(Demonstrate measuring line segments on board.)

You may show the **Know It Right** given on the digital platform.

Curved line segment



Teacher: Look at Example 2. Can we use a scale directly for a curved line?

MUST DO 5 MIN.

Teacher: No, because it bends. What tool do we use instead?

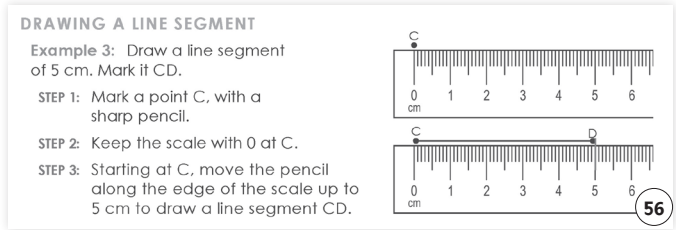
Teacher: Thread or wool. Correct.

Teacher: We place the thread along the curve and then measure it. If the thread measures 9 cm on the scale, what is the length of the curve?

Teacher: 9 cm. Yes.

(Demonstrate measuring a curved surface sing thread or wool.)

Drawing line segment



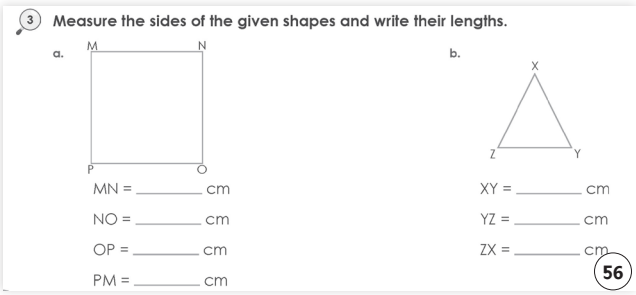
Teacher: Look at Example 3. We need to draw a line segment of 5 cm. Where do we start?

MUST DO 5 MIN.

Teacher: At 0 cm mark. Correct.
Teacher: Where will we stop?
Teacher: At 5 cm mark. Yes.
Teacher: We keep the scale still and draw a straight line. Now, let us try one together.
(Demonstrate drawing a line segment.)
Teacher: Now, take your notebooks. I will give different measurements of line segments.

SHOULD DO
10 MIN.

Teacher: Draw a line of 4 cm. Place your scale properly. Start at 0 cm mark. Where will you stop?
Teacher: At 4 cm mark. Good.
Teacher: Now, draw a line segment of 7 cm. What should you do first?
Teacher: Place the scale, start at 0 and stop at 7. Well done.
(Give different measurements of the line segments.)


3 Measure the sides of the given shapes and write their lengths.
a. M N P O
MN = _____ cm
NO = _____ cm
OP = _____ cm
PM = _____ cm
b. X Z Y
XY = _____ cm
YZ = _____ cm
ZX = _____ cm
56

Teacher: Look at Exercise 3 (a) on page 56. Count and write the lengths of line segments. Let us do the first one.

MUST DO
10 MIN.

Teacher: The first line is MN. Measure it. What is its length?
Teacher: Now, NO. What is its length?
Teacher: Next, OP. How long is it?
Teacher: Last, PM. Measure it.
Teacher: Great work. Let us have a huge round of applause for our work. See you in the next period.

Differentiated Activities

110 km/hr

Draw a square box. Each length measures 5 cm.

80 km/hr

Measure the length of your desk.

40 km/hr

Draw a 6 cm long line segment.

Home Task

Solve question (b) of Exercise 3 given on page 56 in your Main Course Book.

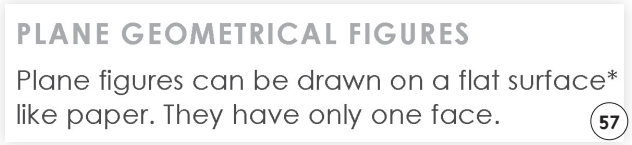
Period 5

Teacher: Good morning, everyone.
Teacher: How are you all today?

SHOULD DO
5 MIN.

Teacher: Let us play a quick 'Shape Walk' game. I will call out a shape and you have to move like that shape.
Teacher: First, move like a rectangle. Walk in a straight path, turn at right angles and continue.
Teacher: Now, move like a square. Keep your steps equal on all sides while turning at right angles.
Teacher: Now, let us try a triangle. Take three steps in different directions, forming a triangle shape.
Teacher: Finally, move like a circle. Spin slowly in a round motion.
Teacher: That was fun. Now, let us explore these shapes in detail. Open your books to page 57.
Note for the Teacher: If space is limited, ask students to trace shapes in the air with their fingers.

Plane Geometrical Figures

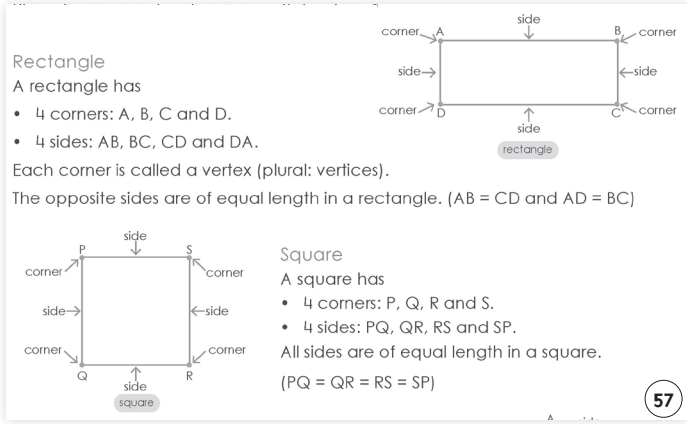

PLANE GEOMETRICAL FIGURES
Plane figures can be drawn on a flat surface* like paper. They have only one face.
57

Teacher: What are 'plane geometrical figures'?
Teacher: Look at the board. Can you see these shapes—square, rectangle, triangle and circle? These are called 'plane geometrical figures'.

MUST DO
5 MIN.

Teacher: Plane geometrical figures are flat and can be drawn on paper. They have length and width but no thickness. Can you think of some objects around you that have the same shape?
Teacher: Yes, face of a clock can be a circle, the face of a book cover can be a rectangle and face of a sandwich cut in half can be a triangle. Well done. Now, let us learn more about these figures.

Rectangle


Rectangle
A rectangle has
- 4 corners: A, B, C and D.
- 4 sides: AB, BC, CD and DA.

Each corner is called a vertex (plural: vertices).
The opposite sides are of equal length in a rectangle. (AB = CD and AD = BC)

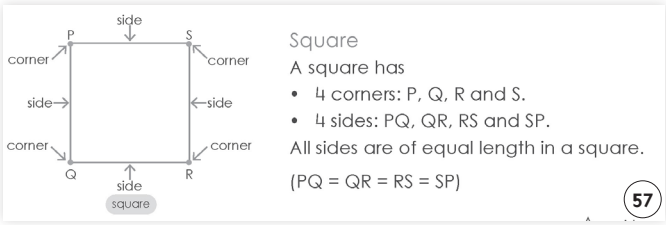
Square
A square has
- 4 corners: P, Q, R and S.
- 4 sides: PQ, QR, RS and SP.

All sides are of equal length in a square.
(PQ = QR = RS = SP)
57

Teacher: Open your books to page 57 and look at the rectangle.

Teacher: How many sides does a rectangle have?
Teacher: Four sides. Now, are all the sides of a rectangle equal?
Teacher: No, only opposite sides are equal.
Teacher: What about its corners? How many corners does it have?
Teacher: Yes, four corners. Each corner is called vertex.
Teacher: Can you think of objects around you that are shaped like rectangles?
Teacher: Yes, face of a book and paper are all examples of rectangles.

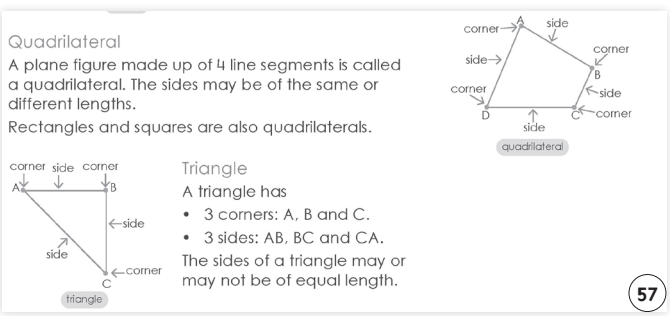
Square



Teacher: Now, let us look at the square.
Teacher: How is a square different from a rectangle?
Teacher: That is correct. A square has four equal sides, whereas a rectangle has opposite sides equal.
Teacher: What about the corners?
Teacher: Both a square and a rectangle have four corners.
Teacher: Can you name some objects that have a square shape?
Teacher: A chessboard tile, a bread slice and a carrom board are all squares.
Teacher: Now, what if the sides are not all equal but still form a closed shape?

MUST DO
5 MIN.

Quadrilateral

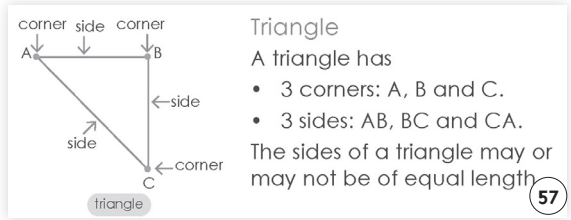


Teacher: A quadrilateral is any shape with four sides.
Teacher: What do you notice about squares and rectangles?
Teacher: They both have four sides. This means they belong to a special group called quadrilaterals.
Teacher: Can you think of other quadrilaterals?
Teacher: Yes, a rhombus and a trapezium are also quadrilaterals.

MUST DO
5 MIN.

Teacher: Are all quadrilaterals the same shape?
Teacher: No, some have equal sides, while others have different side lengths.

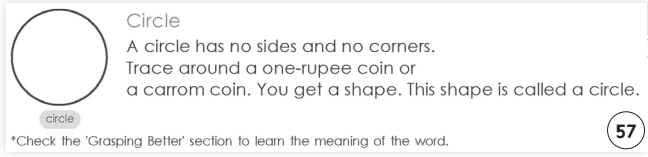
Triangle



Teacher: Now, let us discuss triangles.
Teacher: How many sides does a triangle have?
Teacher: Three sides. What about corners?
Teacher: Three corners.
Teacher: Can a triangle have all sides of different lengths?
Teacher: Yes, some triangles have equal sides and others do not.
Teacher: Look around. Can you find any triangle-shaped objects?
Teacher: A slice of pizza, a road sign and a hanger are good examples.

MUST DO
5 MIN.

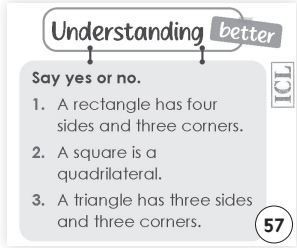
Circle



Teacher: A circle is a special shape with no corners or sides.
Teacher: Trace a circle in the air with your finger. Now, look around. What objects do you see that are circular?
Teacher: Correct. A clock, a coin and a wheel.
Teacher: Let us check our understanding with a quick activity.

MUST DO
5 MIN.

Understanding better



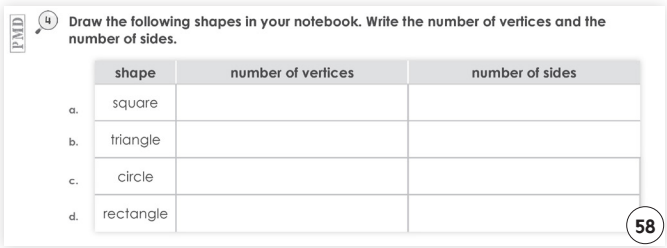
Teacher: Turn to the 'Understanding better' section. I will read a statement and you will raise your hand to say 'Yes' or 'No'. Raise your left hand if you want to say 'Yes'. Raise your right hand if you want to say 'No'.

MUST DO
5 MIN.

1. A rectangle has four sides and three corners. (No)
2. A square is a quadrilateral. (Yes)
3. A triangle has three sides and three corners. (Yes)

You may show the **Animated Activity** given on the digital platform.

MUST DO
5 MIN.


PMD

4 Draw the following shapes in your notebook. Write the number of vertices and the number of sides.

	shape	number of vertices	number of sides
a.	square		
b.	triangle		
c.	circle		
d.	rectangle		

58

Teacher: Open Exercise 4. Let us complete the table by identifying the number of vertices and sides for each shape.

(Guide the students to complete Exercise 4.)

Teacher: Well done, everyone. Let us end the session with a huge round of applause for our efforts.

Differentiated Activities

110 km/hr

Identify different quadrilaterals in your surroundings and note their properties.

80 km/hr

Draw and label different quadrilaterals in your notebook.

40 km/hr

Draw and colour the shapes which learnt today.

Home Task

Find three objects at home that match the shapes we learnt today. Draw them in your notebook.

Period 6

Teacher: Good morning, students. How are you today?

SHOULD DO
5 MIN.

Teacher: Let us play a quick Shape Hunt game. I will call out a shape and you have to find an object around you that looks like it.

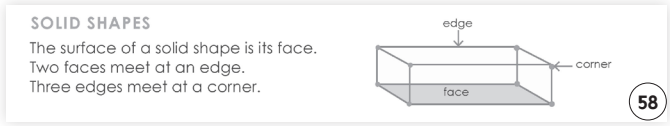
- Find something that looks like a circle. (Yes, the clock.)
- Find something that looks like a square. (Correct, the windowpane.)
- Find something that looks like a rectangle. (Yes, your notebook.)
- Find something that looks like a triangle. (Good, the corner of your ruler.)

Teacher: Now, let us quickly draw these shapes in the air using our fingers.

- Draw a circle in the air.
- Draw a square in the air.
- Draw a rectangle in the air.
- Draw a triangle in the air.

Teacher: Well done, everyone. Now, let us explore how these plane shapes relate to solid shapes.

Solid Shapes



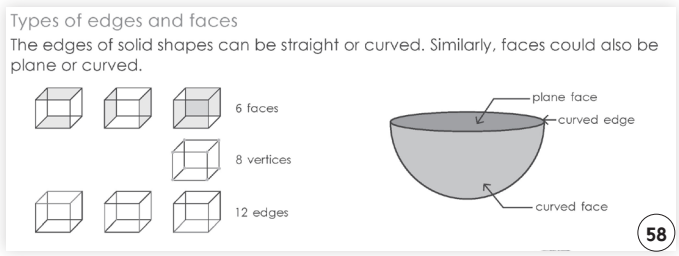
Teacher: Solid shapes are different from flat shapes because they have three dimensions—length, width and height.

MUST DO
5 MIN.

Teacher: Can you name a few solid shapes around you? Yes, the classroom walls form a cuboid, the clock on the wall is a cylinder and a birthday cap looks like a cone.

Teacher: Very good. Let us explore different types of edges and faces now.

Types of edges and faces



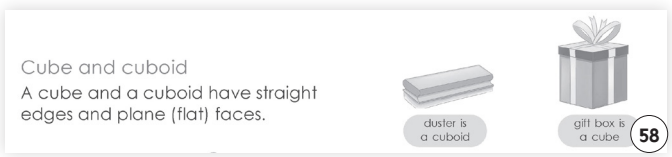
Teacher: The edges of solid shapes can be straight or curved. Their faces can be plane or curved.

MUST DO
5 MIN.

Teacher: Let us look at a cube. It has straight edges and plane faces. Now, let us look at a ball. It has a curved surface with no edges.

Teacher: Can you think of more objects with curved faces? Yes, a water bottle and a bowl. Good thinking.

Cube and cuboid



Teacher: A cube and a cuboid have straight edges and plane faces. The difference is that a cube has all sides equal, while a cuboid has different lengths and widths.

MUST DO
5 MIN.

Teacher: Think about a gift box. What shape is it? Yes, a cube.

What about your schoolbag? Correct, it looks like a cuboid.

Teacher: Well done. Now, let us move on to cylinders and cones.

Cylinder and cone

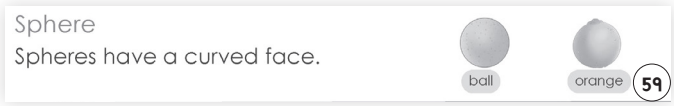
Teacher: A cylinder has two plane faces and one curved face. Can you name an object that looks like a cylinder? Yes, a water bottle.

MUST DO
5 MIN.

Teacher: A cone has one plane face and one curved face that comes to a point. What object looks like a cone? Yes, a traffic cone.

Teacher: Great. Now, let us discuss spheres.

Sphere



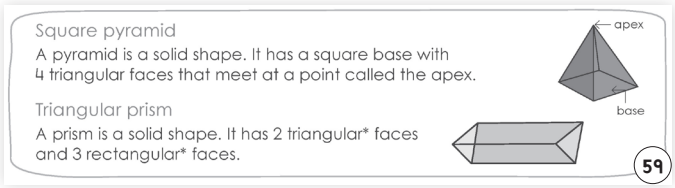
Teacher: A sphere is a solid shape with only a curved face. It has no edges and no vertices.

MUST DO
5 MIN.

Teacher: Can you name objects that look like a sphere? Yes, a basketball, a marble and an orange.

Teacher: Very good. Now, let us look at pyramids and prisms.

Square pyramid



Teacher: A square pyramid has a square base and four triangular faces that meet at a point called the apex.

MUST DO
5 MIN.

Triangular prism

Teacher: A triangular prism has two triangular faces and three rectangular faces.

Teacher: Can you find any real-life objects shaped like these? Yes, tents often look like triangular prisms and the Great Pyramid of Egypt is a square pyramid.

Teacher: Excellent thinking. Let us now understand faces, edges and vertices

Faces edges and vertexes of shapes

Teacher: A face is a flat or curved surface of a shape. An edge is where two faces meet. A vertex is a corner where edges meet.

MUST DO
5 MIN.

Teacher: Let us count the faces, edges and vertices of a cube together.

How many faces, edges and corners do these solid shapes have?

Solid shapes		Face		Edge		Corner (Vertex)
		Plane	Curved	Straight	Curved	
cube		6	0	12	0	8
cuboid		6	0	12	0	8
sphere		0	1	0	0	0
cone		1	1	0	1	1
cylinder		2	1	0	2	0

59

Teacher: A cube has 6 faces, 12 edges and 8 vertices. Let us check a cone. It has 2 faces, 1 curved edge and 1 vertex.

(Show shape models or real objects and demonstrate counting faces, edges and vertices. Engage students by discussing and comparing different shapes.)

Teacher: Well done, everyone. You all did a great work today. Let us give a huge round of applause for everyone's effort. See you in the next class.

Differentiated Activities

110 km/hr

Find five objects in the classroom and classify them as cube, cuboid, cone, cylinder or sphere.

80 km/hr

Draw three solid shapes and label their faces, edges and vertices.

40 km/hr

Use clay or paper to make a model of any one solid shape and describe its faces, edges and vertices.

Home Task

Observe five objects at home and identify their corresponding solid shapes. Write their names and the solid shapes they look like in your notebook.

Period 7

SHOULD DO
5 MIN.

Teacher: Good morning students. How are you today?

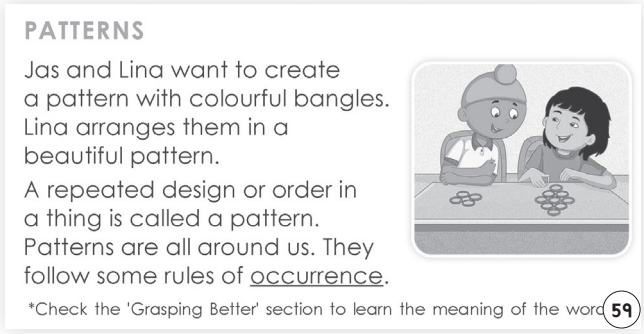
Teacher: Let us start with a quick game. I will clap in a pattern and you have to repeat it.

(Teacher claps: Clap-Clap-Pause-Clap – Students repeat)

Teacher: Well done. Patterns are all around us. Can you think of some patterns we see in daily life?

(Encourage responses such as stripes on a zebra, designs on clothes or the arrangement of tiles.)

Patterns


PATTERNS

Jas and Lina want to create a pattern with colourful bangles. Lina arranges them in a beautiful pattern.

A repeated design or order in a thing is called a pattern. Patterns are all around us. They follow some rules of occurrence.

*Check the 'Grasping Better' section to learn the meaning of the word

59

Teacher: Everyone please open page 59 in the Main Course Book. Let us read about patterns.

MUST DO 10 MIN.

(Discuss the story of Jas and Lina given in the book.)

Teacher: Patterns are repeated designs or arrangements. They can be made using colours, shapes, numbers or movements.

Teacher: Look at the picture of Jas and Lina arranging bangles. What do you observe?

Teacher: Yes, they are making a pattern. Patterns help us understand sequences and arrangements in nature and art.

Discovering better


Discovering better

occurrence: something that happens or exists

LAD

59

Teacher: Sometimes, patterns follow certain rules. A repeated design is called an occurrence.

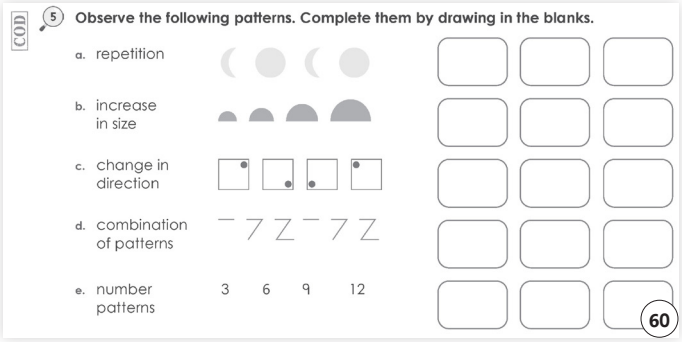
MUST DO 5 MIN.

Teacher: Let us read the 'Discovering better' section to understand this word.

(Ask a student to read the definition aloud.)

Teacher: Now, can you name some things that happen in a repeated way?

(Encourage answers such as day and night, seasons or heartbeat.)


COD

5 Observe the following patterns. Complete them by drawing in the blanks.

a. repetition

b. increase in size

c. change in direction

d. combination of patterns

e. number patterns 3 6 9 12

60

Teacher: Open your books to Exercise 5. Look at the incomplete patterns.

MUST DO 10 MIN.

Teacher: Let us complete them one by one.

(a) Repetition: Observe the pattern. What comes next?

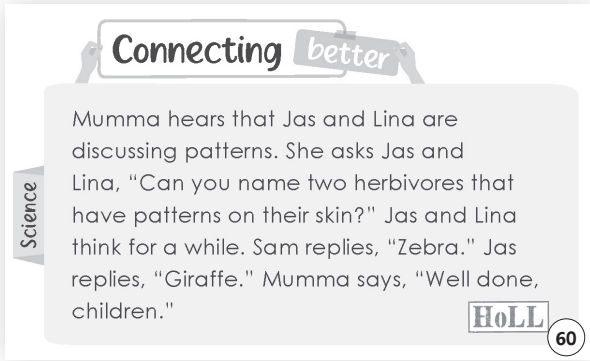
(b) Increase in size: How is the pattern growing? Draw the next shape.

(Guide the students to complete the remaining questions in a similar way.)

Teacher: Well done. Now, let us move to a fun discussion.

You may show the **Explainer Video** given on the digital platform.

Connecting better


Connecting better

Science

Mumma hears that Jas and Lina are discussing patterns. She asks Jas and Lina, "Can you name two herbivores that have patterns on their skin?" Jas and Lina think for a while. Sam replies, "Zebra." Jas replies, "Giraffe." Mumma says, "Well done, children."

HoLL

60

Teacher: Who will read and explain the 'Connecting better' section given on page 60 in your Main Course Book. Patterns are not only in shape but also in animals. Can you name some animals with patterned skin?

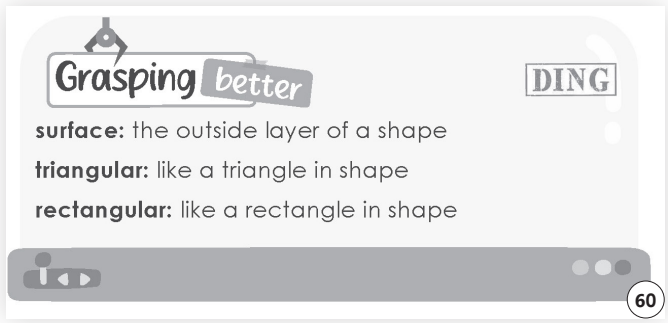
MUST DO 5 MIN.

(Encourage responses like zebra, giraffe, tiger, cheetah.)

Teacher: Fantastic. Patterns help animals blend into their surroundings. This is called camouflage.

You may show the **Mental Maths** given on the digital platform.

Grasping better


Grasping better

DING

surface: the outside layer of a shape

triangular: like a triangle in shape

rectangular: like a rectangle in shape

60

Teacher: Open the 'Grasping better' section in your book.

MUST DO 5 MIN.

Teacher: Let us revisit the meanings of the words surface, triangular and rectangular.

Teacher: Can you find objects around you that match these shapes?
(Encourage responses like a book for rectangular, a roof for triangular.)
Teacher: Well done, everyone. You all did a great work today. Let us give a huge round of applause for everyone's effort. See you in the next class.

Differentiated Activities

110 km/hr

Create your own repeating pattern using shapes or numbers and explain the rule.

80 km/hr

Observe and draw a pattern you see at home, like a tile design or a curtain pattern.

40 km/hr

Draw a simple pattern using basic shapes (circle, square, triangle) and colour them in a repeating sequence.

Home Task

Book of Project Ideas

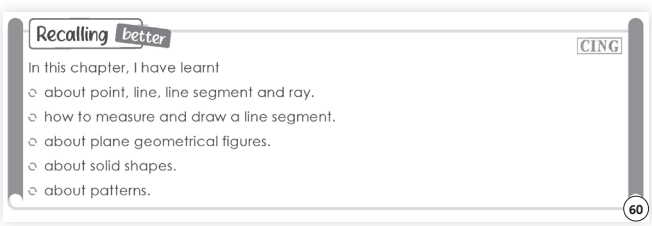
Complete the project mentioned below and present it in the final period of this chapter.
Matchstick Patterns : Take about 50 matchsticks, plain paper, pencil and ruler. Use 3 matchsticks to form a triangle. Arrange 4 matchsticks to make a square. Use 6 matchsticks to create 2 triangles. Arrange 8 matchsticks to make 2 squares. Use 10 matchsticks to create a symmetrical design. Count the matchsticks used and label each pattern. Draw patterns on paper and describe them.

Period 8

SHOULD DO
5 MIN.

Teacher: Good morning students. How are you today?
Teacher: Let us begin with a quick revision game. I will describe a shape and you have to guess what it is.
Teacher: It has no sides, no edges and no corners. What is it? (Sphere)
It has four equal sides and four corners. What is it? (Square)
It has three sides and three corners. What is it? (Triangle)
Teacher: Well done. Now, let us recall what we have learnt in this chapter.

Recalling better

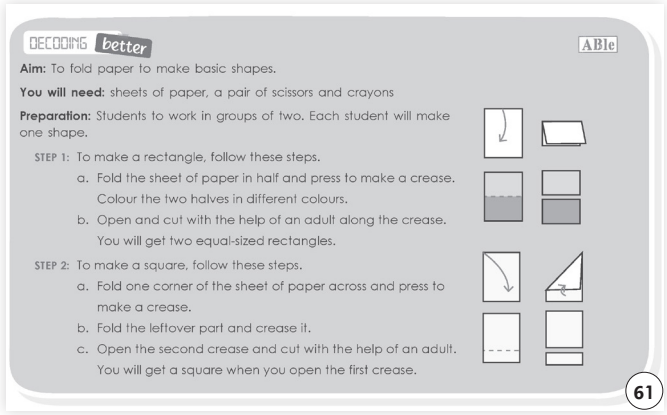

Recalling better
CING
In this chapter, I have learnt
- about point, line, line segment and ray.
- how to measure and draw a line segment.
- about plane geometrical figures.
- about solid shapes.
- about patterns.

60

MUST DO
10 MIN.

Teacher: In this chapter, we have learnt about different types of lines, shapes, solid figures and patterns. Let us quickly go through them.
Teacher: Open the 'Recalling better' section in your book. Read each point and think about what you remember.
Teacher: Can someone explain what a line segment is?
Teacher: What are the different types of shapes we studied?
Teacher: How are solid shapes different from plane shapes?
Teacher: Excellent. Now, let us move on to an interesting activity.
You may show the **Quick Maths** given on the digital platform.

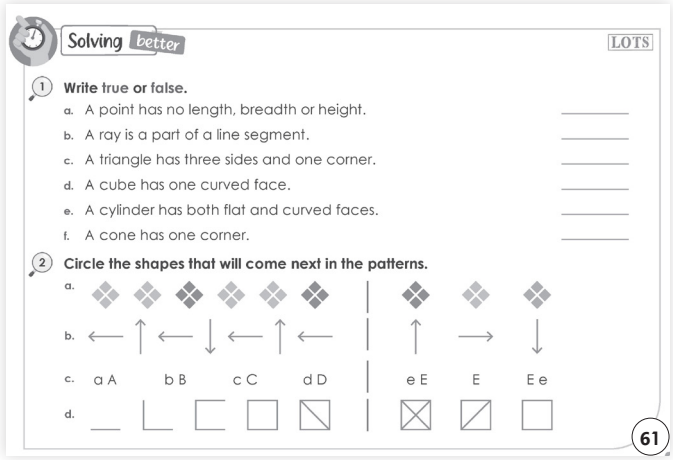
Decoding better


DECODING better
ABle
Aim: To fold paper to make basic shapes.
You will need: sheets of paper, a pair of scissors and crayons
Preparation: Students to work in groups of two. Each student will make one shape.
STEP 1: To make a rectangle, follow these steps.
a. Fold the sheet of paper in half and press to make a crease. Colour the two halves in different colours.
b. Open and cut with the help of an adult along the crease. You will get two equal-sized rectangles.
STEP 2: To make a square, follow these steps.
a. Fold one corner of the sheet of paper across and press to make a crease.
b. Fold the leftover part and crease it.
c. Open the second crease and cut with the help of an adult. You will get a square when you open the first crease.
61

MUST DO
5 MIN.

Teacher: Now, we will create shapes using paper folding.
(Guide the students to complete the activity.)
Teacher: Observe the shapes you have made. Colour them in different shades.
Teacher: Well done. Let us practise the concepts we learnt.

Solving better


Solving better
LOTS
1. Write true or false.
a. A point has no length, breadth or height. _____
b. A ray is a part of a line segment. _____
c. A triangle has three sides and one corner. _____
d. A cube has one curved face. _____
e. A cylinder has both flat and curved faces. _____
f. A cone has one corner. _____
2. Circle the shapes that will come next in the patterns.
a.
b.
c. a A b B c C d D | e E E E e
d.
61

Teacher: Turn to Exercise 1 in the 'Solving better' section given on page 61. Let us solve the true or false questions.

MUST DO
5 MIN.

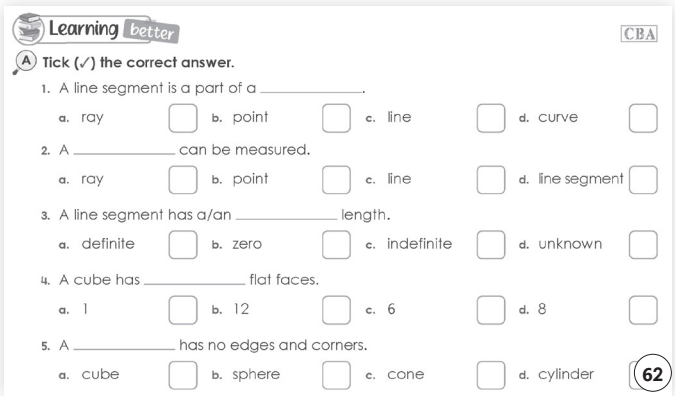
Teacher: Read each statement and you will write 'True' or 'False' in your notebooks.

Teacher: Now, check your answers and discuss if anyone has a different response.

(Discuss every question with the students.)

You may show the **Animated Activities** given on the digital platform.

Learning better


Learning better

CBA

A Tick (✓) the correct answer.

1. A line segment is a part of a _____.
   a. ray ☐ b. point ☐ c. line ☐ d. curve ☐
2. A _____ can be measured.
   a. ray ☐ b. point ☐ c. line ☐ d. line segment ☐
3. A line segment has a/an _____ length.
   a. definite ☐ b. zero ☐ c. indefinite ☐ d. unknown ☐
4. A cube has _____ flat faces.
   a. 1 ☐ b. 12 ☐ c. 6 ☐ d. 8 ☐
5. A _____ has no edges and corners.
   a. cube ☐ b. sphere ☐ c. cone ☐ d. cylinder ☐

62

Teacher: Open Exercise A in the 'Learning better' section. Read each question carefully and tick the correct answer.

MUST DO
5 MIN.

Teacher: Let us do the first one together.

1. A line segment is a part of a _____.

(Options: Ray, Point, Line, Curve)

Teacher: Now, complete the rest of the questions on your own. Raise your hand if you need help.

Teacher: Well done, everyone. You all worked hard today and I am proud of your efforts. Let us end the session with a big round of applause for each other. See you in the next class.

Differentiated Activities

110 km/hr

Create a 3D model of any solid shape using paper or clay and describe its faces, edges and corners.

80 km/hr

Draw and label three different solid shapes. Write one real-life example of each.

40 km/hr

Find five different objects around you and match them with their solid shapes. Write their names in your notebook.

Home Task

Solving better

Complete Exercise 2 from the 'Solving better' section given on page 61 in Main Course Book.

Period 9

Teacher: Good morning, students. How are you today?

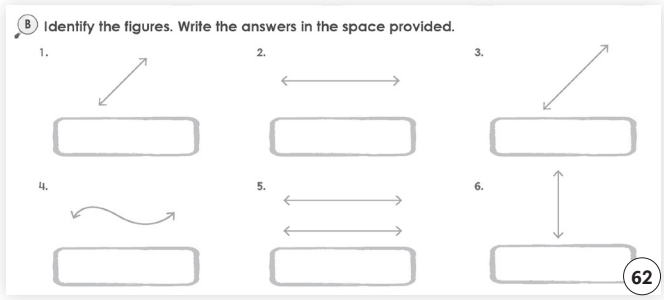
SHOULD DO
5 MIN.

Teacher: Let us start with a quick activity. I will draw different types of lines on the board and you have to name them.

(Draw a straight line, a curved line, a parallel line and an intersecting line.)

Teacher: Well done. Now, let us move on to some exercises to test our understanding.

Learning better


B Identify the figures. Write the answers in the space provided.

1. 2. 3. 4. 5. 6.

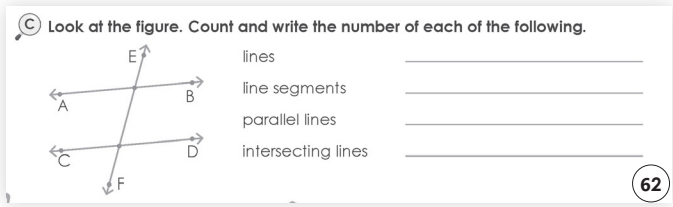
62

Teacher: Open your books to Exercise B. Look at the given figures and identify them.

MUST DO
10 MIN.

Teacher: Let us discuss the first one together. What kind of figure is this? Yes, it is a line. Now, complete the rest on your own.

Teacher: Once you are done, check with your partner to confirm your answers.


C Look at the figure. Count and write the number of each of the following.

lines _____

line segments _____

parallel lines _____

intersecting lines _____

62

Teacher: Now, look at the figure in Exercise C. Count the number of lines, line segments, parallel lines and intersecting lines.

MUST DO
10 MIN.

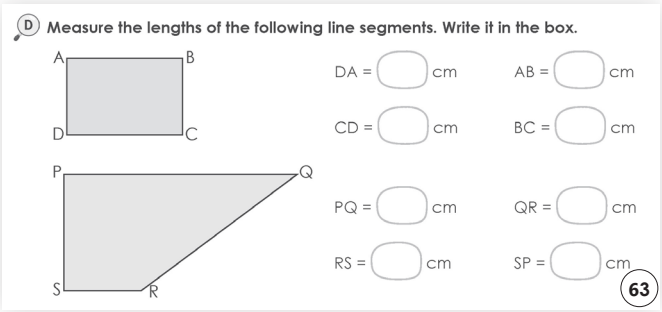
Teacher: How many lines do you see?

How many line segments can you find?

Which lines are parallel?

Which lines intersect?

Teacher: Write your answers in the space provided. Discuss with your partner before finalizing them.



Teacher: Now, let us measure the lengths of the given line segments in Exercise D.

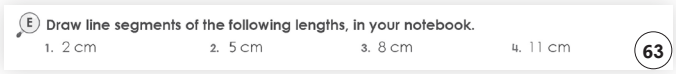
MUST DO 5 MIN.

Teacher: Take your rulers and carefully measure each line segment. Write down the correct length in the box.

Teacher: Start with DA. What is its length? Now move to AB.

Teacher: Complete the exercise and compare your answers with a classmate.

You may show the **Quiz** given on the digital platform.



Teacher: Now, let us practise drawing line segments of given lengths.

MUST DO 5 MIN.

Teacher: Everyone please open page 63 in the Main Course Book. Le us do Exercise E.

Teacher: Take your rulers and neatly draw a line segment of 2 cm in your notebook. Label it properly.

Teacher: Now, draw another line segment of 5 cm. Check with your partner to see if your measurements are correct.

Teacher: Well done. Keep your rulers handy for the next class as well.

Teacher: Well done, everyone. Let us end the session with a big round of applause for our hard work. See you in the next class.

Differentiated Activities

110 km/hr

Draw five different types of lines (horizontal, vertical, diagonal, curved, parallel) and label them.

80 km/hr

Identify five objects in your surroundings that have straight or curved edges and list them in your notebook.

40 km/hr

Use a ruler to draw three straight lines and one curved line on a blank page.

Home Task

Complete questions (3) and (4) of Exercise E given on page 63 in Main Course Book.

Period 10

SHOULD DO 5 MIN.

Teacher: Good morning, students. How are you today?

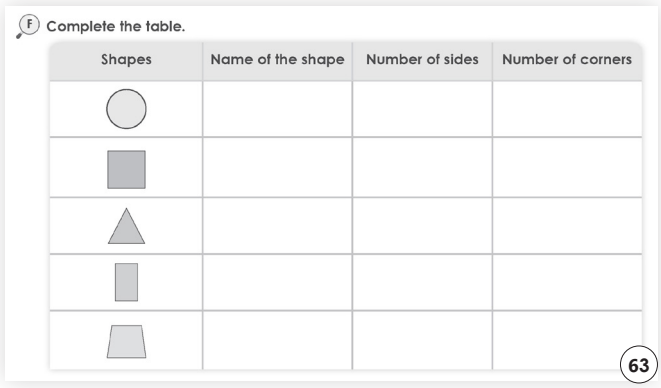
Teacher: Let us begin with a quick game. I will describe a shape and you have to find an object in the classroom that matches it.

Teacher: Find something that looks like a rectangle.

Find something that looks like a cylinder.

Find something that looks like a triangle.

Teacher: Well done. Now, let us move on to the exercises.



Teacher: Open your books to Exercise F given on page 63. Look at the table with different shapes.

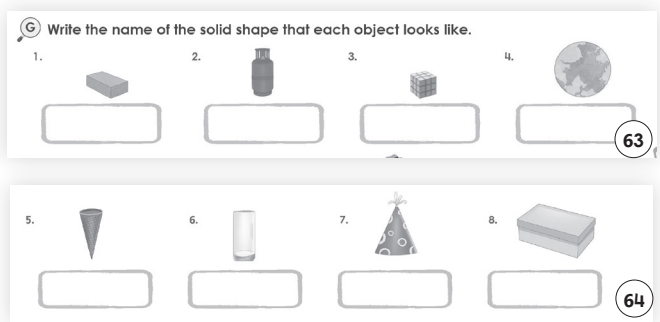
MUST DO 10 MIN.

Teacher: We will complete the table by writing the names of the shapes, the number of sides and the number of corners.

Teacher: Let us do the first one together. What is the name of the first shape? Yes, it is a circle. How many sides does a circle have? Correct, zero. How many corners? None.

Teacher: Now, complete the rest of the table on your own. Discuss with your partner if needed.

You may show the **Infographic** given on the digital platform.



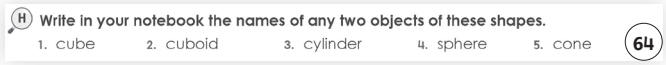
Teacher: Now, look at Exercise G. Observe the objects and write the name of the solid shape they resemble.

MUST DO 10 MIN.

Teacher: What does a brick look like? Yes, a cuboid. What about a globe? Correct, a sphere.

Teacher: Complete the remaining objects on your own. Think carefully before writing your answers.

You may show the **Slideshow** given on the digital platform.



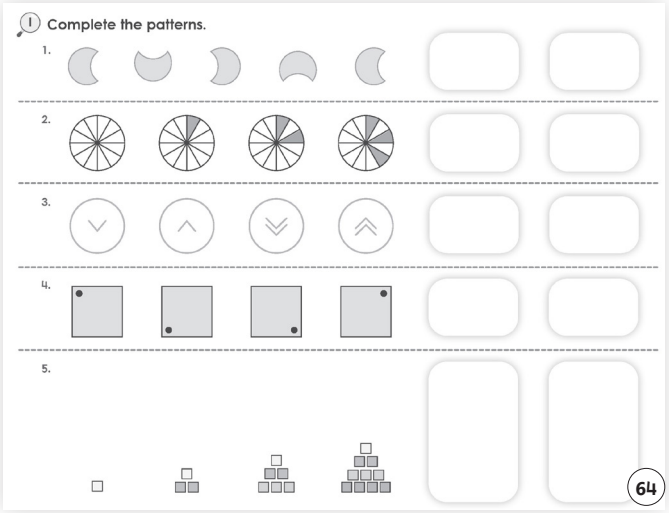
Teacher: We will do Exercise H in the notebook. Write the names of any two objects that match each solid shape listed.

MUST DO
5 MIN.

Teacher: For example, a cube looks like a dice or an ice cube

You may show the **I Explain** given on the digital platform.

Teacher: Write your answers neatly and underline the shape names.



Teacher: Now, let us complete the patterns in Exercise I. Look at the first pattern. What comes next?

MUST DO
10 MIN.

Teacher: Patterns follow a rule. Identify the rule and complete the missing parts.

Teacher: Look at the second pattern. Is the shape changing in size, position or colour? Observe carefully before answering.

Teacher: Work in pairs to complete the remaining patterns. Share your answers with the class.

Teacher: Well done, everyone. You worked carefully and observed patterns around you. Let us give ourselves a big round of applause. See you in the next class.

Differentiated Activities

110 km/hr

Design a rangoli or tile pattern using different shapes. Draw it in your notebook and explain how the pattern repeats.

80 km/hr

Use letters or numbers to form a pattern (e.g., A B A B, 2 4 6 8). Write it in your notebook and explain how the pattern continues.

40 km/hr

Use finger painting or thumbprints to create a pattern on a sheet of paper. Observe and describe the repetition in your design.

Home Task

Complete Exercise J of Learn better given on page 64 in Main Course Book.

Bring cut-out shapes from chart paper for the bookmark activity in the next class.

Period 11

SHOULD DO
5 MIN.

Teacher: Good morning, students. How are you today?

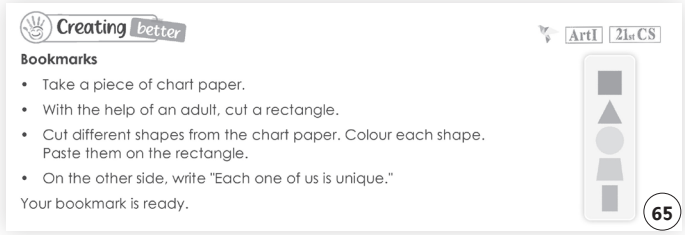
Teacher: Let us begin with a quick recall. I will give you hints and you have to guess the correct shape. Raise your hand if you know the answer.

- I have no sides and no corners. What am I? (Circle)
- I have three sides and three corners. What am I? (Triangle)
- I have six faces, all squares. What am I? (Cube)

Teacher: Well done. Now, let us begin our activities for today.

MUST DO
10 MIN.

Creating better

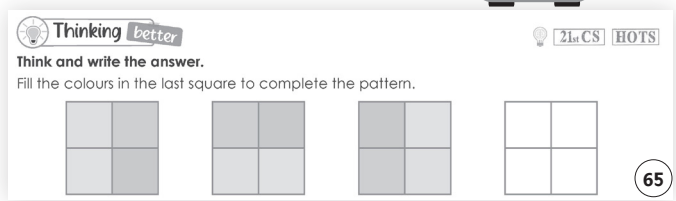


Teacher: Today, we will make bookmarks using different shapes.

(Guide the students with reference to the steps given on page 65.)

MUST DO
10 MIN.

Thinking better



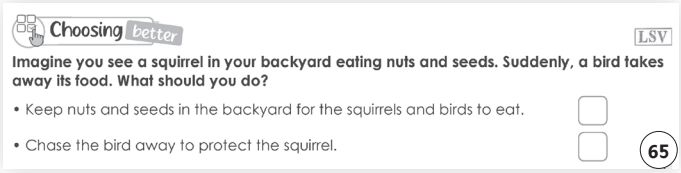
Teacher: Turn to page 65 and look at the 'Thinking better' section. Observe the pattern in the squares.

Teacher: The last square is missing its colours. Think carefully about the pattern's rule. Which colours should go in the missing square?

Teacher: Fill in the missing colours in your book. Compare your answer with a friend.

You may show the **HOTS** given on the digital platform.

Choosing better


Choosing better LSV

Imagine you see a squirrel in your backyard eating nuts and seeds. Suddenly, a bird takes away its food. What should you do?

- Keep nuts and seeds in the backyard for the squirrels and birds to eat. ☐
- Chase the bird away to protect the squirrel. ☐

65

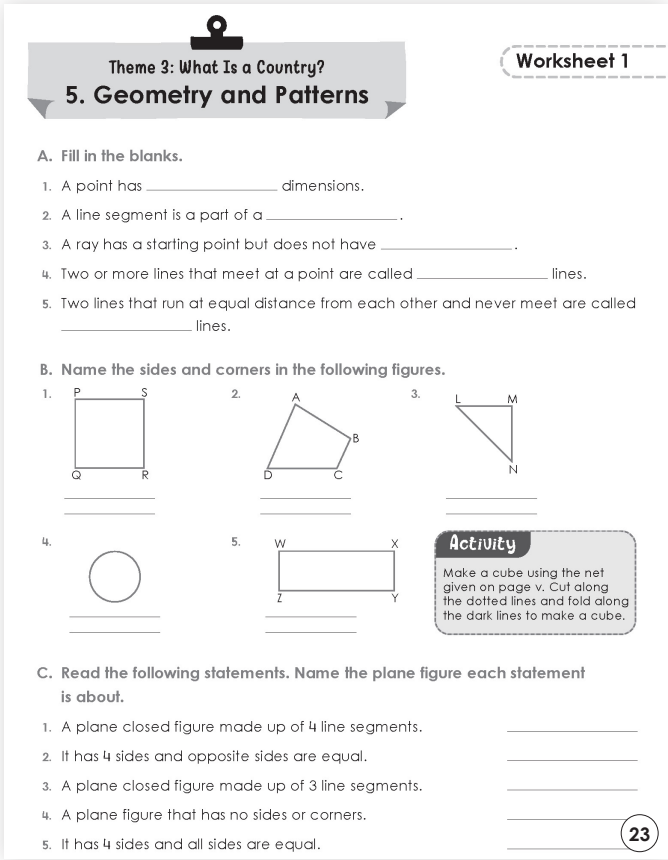
Teacher: Let us move to the 'Choosing better' activity. Imagine you see a squirrel eating nuts and suddenly a bird takes its food away. What should you do?

MUST DO
5 MIN. ☐

- Keep nuts and seeds in the backyard for both the squirrels and birds.
- Chase the bird away to protect the squirrel.

Teacher: Think carefully before choosing your answer. What would be the kindest and most helpful action?

Worksheet 1


Theme 3: What Is a Country?

5. Geometry and Patterns

Worksheet 1

A. Fill in the blanks.

1. A point has _____ dimensions.
2. A line segment is a part of a _____.
3. A ray has a starting point but does not have _____.
4. Two or more lines that meet at a point are called _____ lines.
5. Two lines that run at equal distance from each other and never meet are called _____ lines.

B. Name the sides and corners in the following figures.

1. P S Q R
2. A B D C
3. L M N
4.
5. W X Z Y

Activity

Make a cube using the net given on page v. Cut along the dotted lines and fold along the dark lines to make a cube.

C. Read the following statements. Name the plane figure each statement is about.

1. A plane closed figure made up of 4 line segments. _____
2. It has 4 sides and opposite sides are equal. _____
3. A plane closed figure made up of 3 line segments. _____
4. A plane figure that has no sides or corners. _____
5. It has 4 sides and all sides are equal. _____

23

Teacher: Now, let us complete Worksheet 1. Everyone, please open page 23 in your workbook.

MUST DO
15 MIN. ☐

Teacher: Well done, everyone. You worked hard and used your creativity today. Let us end the session with a big round of applause. See you in the next class.
(Guide the students to complete the worksheet.)

Differentiated Activities

110 km/hr

Create a paper net for a cube, cut it out and fold it to make a 3D shape.

80 km/hr

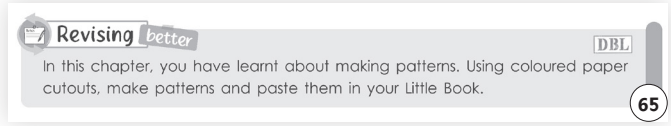
Create a new pattern using different shapes and colours. Draw it in your notebook and describe how the pattern repeats

40 km/hr

Identify and list three objects in your surroundings that look like a cube, cylinder or cone.

Home Task

Revising better


Revising better DBL

In this chapter, you have learnt about making patterns. Using coloured paper cutouts, make patterns and paste them in your Little Book.

65

Complete 'Revising better' given on page 65. In your Main Course Book

Remember to bring your completed project in the next period for presentation.

Period 12

Teacher: Good morning, students. How are you today?

SHOULD DO
5 MIN. ☐

Teacher: Let us start with a quick activity. I will say a shape and you will draw it in the air using your finger.

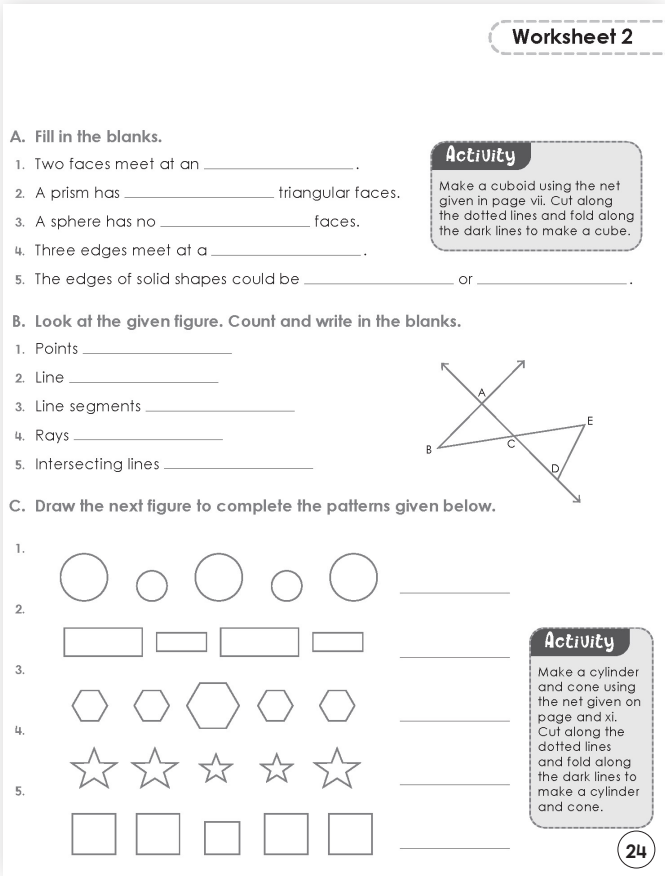
- Circle
- Square
- Triangle
- Rectangle

Teacher: Great work. Now, let us move on to today's exercises.

Worksheet 2

Teacher: Everyone please open page 24 in your workbook. Look at question A. Let us read the first sentence: 'Two faces meet at an _____.' What should we write here?

MUST DO
15 MIN. ☐



Worksheet 2

A. Fill in the blanks.

1. Two faces meet at an _____.
2. A prism has _____ triangular faces.
3. A sphere has no _____ faces.
4. Three edges meet at a _____.
5. The edges of solid shapes could be _____ or _____.

Activity

Make a cuboid using the net given in page vii. Cut along the dotted lines and fold along the dark lines to make a cube.

B. Look at the given figure. Count and write in the blanks.

1. Points _____
2. Line _____
3. Line segments _____
4. Rays _____
5. Intersecting lines _____

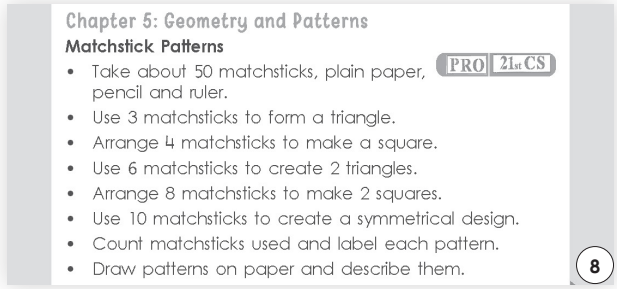
C. Draw the next figure to complete the patterns given below.

1.
2.
3.
4.
5.

Activity

Make a cylinder and cone using the net given on page and xi. Cut along the dotted lines and fold along the dark lines to make a cylinder and cone.

24



Chapter 5: Geometry and Patterns

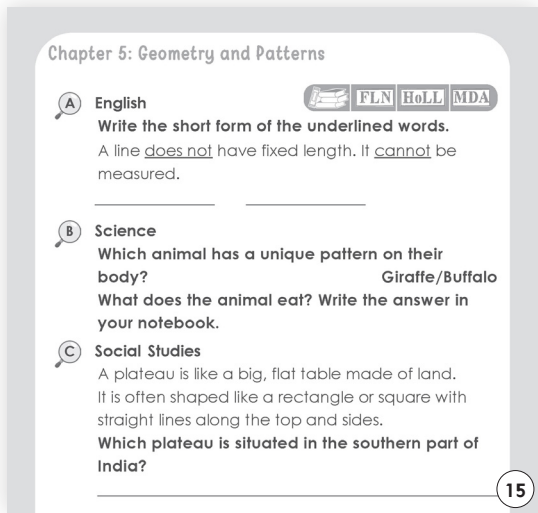
Matchstick Patterns

PRO 21st CS

- Take about 50 matchsticks, plain paper, pencil and ruler.
- Use 3 matchsticks to form a triangle.
- Arrange 4 matchsticks to make a square.
- Use 6 matchsticks to create 2 triangles.
- Arrange 8 matchsticks to make 2 squares.
- Use 10 matchsticks to create a symmetrical design.
- Count matchsticks used and label each pattern.
- Draw patterns on paper and describe them.

8

Book of Holistic Development



Chapter 5: Geometry and Patterns

FLN HoLL MDA

A English

Write the short form of the underlined words.

A line does not have fixed length. It cannot be measured.

_____ _____

B Science

Which animal has a unique pattern on their body? Giraffe/Buffalo

What does the animal eat? Write the answer in your notebook.

C Social Studies

A plateau is like a big, flat table made of land. It is often shaped like a rectangle or square with straight lines along the top and sides.

Which plateau is situated in the southern part of India?

_____

15

Teacher: Yes, at an edge. Now, move to the next question.

Teacher: 'A prism has _____ triangular faces.' Think about what we learned about prisms.

Teacher: Now, complete the remaining blanks on your own. Let me know if you need help.

Teacher: Let us now look at question B. Observe the given figure and count the number of points, lines, line segments, rays and intersecting lines.

Teacher: Let us count together. How many points do we see? Good, now count the lines.

Teacher: Write your answers in the blanks and check with a partner.

Teacher: Now, turn to question C. Look at the given patterns and draw the next figure to complete each pattern.

Teacher: Identify the rules in each pattern before drawing. Think about size, shape or position.

(Guide the students to complete the worksheet.)

Book of Project Idea

(Discuss the project assigned in the previous period, focusing on helping students understand the objectives and addressing any challenges they faced.)

COULD DO

5 MIN.

(Refer to the Book of Holistic Teaching, page 15 under the title 'Geometry and Patterns.' Complete the activities mentioned in this section and ensure that the students complete them. These activities are designed to enhance their holistic understanding and engagement with the topic. Provide any necessary support and materials to help the students successfully finish the activities.)

COULD DO

10 MIN.

Teacher: Now, let us fill in the last column of the KWL chart.

SHOULD DO

5 MIN.

Teacher: In this column we will write what we have learned in this chapter.

Teacher: Think about the topics, have we learnt and write them in the 'L' column of the chart.

(Wait for students to fill in the chart.)

Teacher: Let us all give a huge round of applause to everyone for their hard work and creativity. Great work, everyone. See you in the next class. Have a wonderful day ahead.

Differentiated Activities

110 km/hr

Design a floor tile pattern using different geometric shapes. Draw it in your notebook and explain how the shapes repeat.

80 km/hr

Observe a leaf or flower and sketch the patterns you notice in its shape or veins. Write a few lines about its symmetry

40 km/hr

Create a rangoli or mosaic design using different geometric shapes.

Home Task

Practise the questions discussed in this chapter.

Learning Outcomes

The students will:

Domain	Development Area
Physical Development	• draw, measure and construct geometric shapes accurately.
Socio-Emotional and Ethical Development	• collaborate in group activities, respecting different perspectives while solving geometry-based tasks.
Cognitive Development	• recognise, classify and analyze 2D and 3D shapes, patterns and spatial relationships.
Language and Literacy Development	• describe geometric concepts using appropriate mathematical vocabulary in discussions and written work.
Aesthetic and Cultural Development	• explore geometric patterns in art, architecture and cultural designs, appreciating their significance.
Positive Learning Habits	• develop curiosity and perseverance in problem-solving, applying logical reasoning to geometry-based challenges.

Starry Knights

What challenges did you overcome? List them here.

Give yourself a STAR. ☐