Lesson-6: Multiplication

15 Periods (40 minutes each)

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

Animated Activities, Animation, Dictionary, eBook, Explainer Video, HOTS, I Explain, Infographic, Mental Maths, Quiz, Slideshow, Maths Lab, Toys from Trash, Test Generator

Confirming better: I am a good leader.

Curricular Goals and Objectives (NCF)

To enable the students:

- to understand multiplication as repeated addition through real-life scenarios.
- to develop fluency in multiplication facts by practising tables.
- to apply multiplication strategies like arrays .
- to explore multiplication properties for efficient problem-solving.
- to strengthen problem-solving skills using real-world applications.
- to engage in collaborative and interactive multiplication activities

Methodology

Period 1

SHOULD DO 5 MIN.

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

Teacher: Today, we will begin our new topic, multiplication. Before we start, let us play a quick game. I will say a multiplication fact and you must tell me the answer as quickly as possible.

Teacher: Let us begin. What is 3 times 4?

Teacher: Yes, it is 12.

Teacher: What is 6 times 2?

Teacher: Correct, it is 12.

Teacher: What is 5 times 5?

Teacher: Yes, it is 25.

Teacher: What is 7 times 3?

Teacher: Well done, it is 21.

Teacher: You all did a great work, before we move further, let us think about where we use multiplication in our daily life. Can anyone give me an example?

Teacher: Yes, when we buy fruits, we often count them in groups. If we buy 3 boxes of strawberries, each box having 6 strawberries, how can we quickly find the total?

Teacher: That is right. We multiply: 3 × 6 = 18 strawberries.

Teacher: Think about school. If we have 4 rows of desks and each row has 5 desks, how can we find the total number of desks?

Teacher: Excellent. 4 × 5 = 20 desks.

(Modify the example as per the situation.)

Teacher: Multiplication helps us count things faster and makes calculations easier in real life. Keep thinking of more examples and we will continue learning.

Confirming better

SHOULD DO 5 MIN.

Teacher: Today, our positive thought is 'I am a good leader.'

Teacher: What does being a good leader mean?

Teacher: Yes, a good leader helps others, listens carefully and sets a good example.

Teacher: Can you think of ways we can be good leaders in our class?

Teacher: That is right. We can help our friends when they are struggling, work in teams and encourage each other to do our best.

SHOULD DO 10 MIN.

Teacher: We will begin a new chapter, Multiplication. 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.

K	W	L

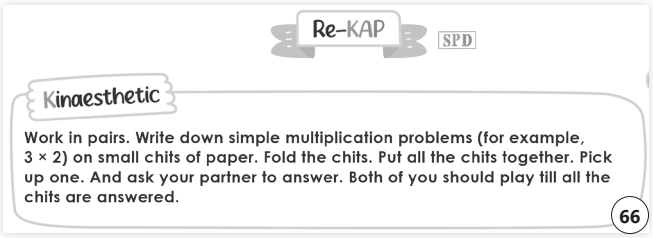
Teacher: Take a few minutes to think and write. If you have any questions, feel free to ask.

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

MUST DO 10 MIN.

Teacher: Everybody please open page 66 in your Main course book. Who will read and explain the activity? (Scaffold the students to complete the activity.)


Re-KAP SPD

Kinaesthetic

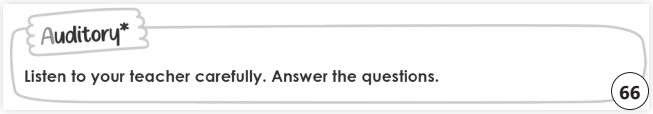
Work in pairs. Write down simple multiplication problems (for example, 3 × 2) on small chits of paper. Fold the chits. Put all the chits together. Pick up one. And ask your partner to answer. Both of you should play till all the chits are answered.

66

Auditory

MUST DO 5 MIN.

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


Auditory*

Listen to your teacher carefully. Answer the questions.

66

Teacher: 10 ants are walking home in a line. Each ant has 6 legs. What is the total number of legs all the ants have together?

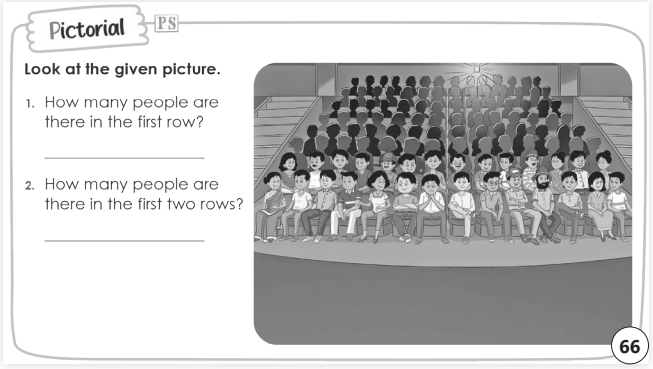
Teacher: Great effort, everyone, Now, let us explore the pictorial activity.

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

Pictorial

MUST DO 5 MIN.

Teacher: Now, look at the picture in your books and answer the questions.


Pictorial PS

Look at the given picture.

1. How many people are there in the first row?

_____

2. How many people are there in the first two rows?

_____

66

(Scaffold the students to complete the activity.)

Teacher: That was an amazing class. You all participated so well today.

Teacher: Let us all give a huge round of applause for everyone's effort. See you all in the next class.

Differentiated Activities

110 km/hr

How can multiplication help us in real life? Give an example.

80 km/hr

If there are 3 groups of 4 apples, how can we write this as a multiplication statement?

40 km/hr

How many legs do 3 cats have in total? Think and count.

Home Task

Write any two real-life examples where multiplication is used. Draw an array of 3 rows with 4 objects in each and write the multiplication statement.

Period 2

SHOULD DO 5 MIN.

Teacher: Good morning students. How are you?

Teacher: Before we begin, let us quickly recall what we learnt in our last class. I will ask a few questions and you will answer as fast as you can.

Teacher: If a basket has 4 apples and there are 3 such baskets, how many apples are there in total?

Teacher: Yes, 4 × 3 = 12 apples.

Teacher: If each row of chairs has 5 chairs and there are 4 rows, what is the total number of chairs?

Teacher: Correct, 5 × 4 = 20 chairs.

Teacher: What is another way of writing 2 + 2 + 2 + 2 + 2?

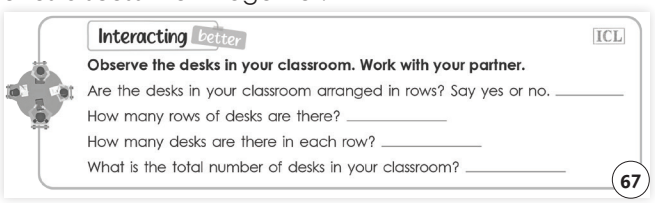
Teacher: Well done. It is 5× 2 = 10.

Teacher: Great work, everyone. Now, let us move ahead.

Interactive better

MUST DO 5 MIN.

Teacher: Open your books to the 'Interactive better' activity given on page 67. Look at the questions given. Let us discuss them together.


Interacting better ICL

Observe the desks in your classroom. Work with your partner.

Are the desks in your classroom arranged in rows? Say yes or no. _____

How many rows of desks are there? _____

How many desks are there in each row? _____

What is the total number of desks in your classroom? _____

67

Teacher: Are the desks in your classroom arranged in rows?

Teacher: Yes, they are. Now, count and tell me how many rows of desks are there.

Teacher: Well done. Now, how many desks are there in each row?

Teacher: Great. Instead of counting all the desks one by one, can we use multiplication to find the total number of desks?

(Continue the activity in the similar way.)

Teacher: Let us read a short story about Sam and his parents buying pencils. Pay close attention because we will discuss the multiplication used in this story afterward.

MUST DO
20 MIN.

(Ask students to read the story and explain it to the class.)

Teacher: Can you explain how Sam's father used multiplication here?

Teacher: Yes, instead of adding ₹15 five times, he multiplied: 5 × 15 = ₹75.

Teacher: This is how multiplication helps us make calculations faster.

Teacher: What would happen if Sam wanted 7 pencils instead of 5? How much would he have to pay?

Teacher: Correct. We can calculate it as 7 × 15 = ₹105.

Teacher: If Sam bought 3 notebooks instead and each notebook cost ₹20, how much would the total be?

Teacher: Yes. 3 × 20 = ₹60.

Teacher: Now, let us discuss. If one notebook costs ₹20 and we buy 4 notebooks, how much will we pay?

Teacher: Correct, 4 × 20 = ₹80.

Teacher: This is how multiplication helps us in real life, whether we are buying things, counting objects or making calculations quickly

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

Teacher: Now, let us discuss multiplication in detail.

Teacher: What is multiplication?

SHOULD DO
10 MIN.

Teacher: Yes, it is repeated addition. Instead of adding the same number multiple times, we multiply.

Teacher: Why do we use multiplication?

Teacher: Correct. It helps us count faster, saves time and is useful in real life.

Teacher: How do we do multiplication?

Teacher: We use numbers called factors and find their product. For example, in 5 × 3 = 15, the numbers 5 and 3 are factors and 15 is the product.

Teacher: The numbers that are multiplied are called factors. The answer is called the product.

Teacher: Can you give me one example of how multiplication is used in daily life?

Teacher: Yes, when buying things in groups, arranging objects in rows or counting total items in packets.

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

Teacher: See you all in the next class, where we will continue exploring multiplication in new and exciting ways. Keep practising and have a great day.

Differentiated Activities

110 km/hr

If a box contains 8 markers and a teacher buys 6 such boxes, how many markers are there in total? Write the multiplication statement and explain how you got the answer.

80 km/hr

Solve these multiplication statements and draw an array for one: 4 × 9 = __, 7 × 6 = __, 5 × 8 = __.

40 km/hr

Draw 2 groups of 6 pencils each. Count and write the multiplication statement below your drawing.

Home Task

Make a shopping bill with 3 items bought in equal quantities and find the total cost using multiplication. Add all totals to find the final amount to be paid.

Period 3

SHOULD DO
5 MIN.

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

Teacher: Before we begin, let us quickly recall what we learnt in our last class. I will ask a few questions and you will answer as fast as you can.

Teacher: If each notebook costs ₹20 and you buy 4 notebooks, how much will you pay?

Teacher: Yes, 4 × 20 = ₹80.

Teacher: If there are 6 shelves with 8 books on each shelf, how many books are there in total?

Teacher: Correct. 6 × 8 = 48 books.

Teacher: What happens when we multiply a number by 10?

Teacher: Yes, we add a zero to the right of the number.

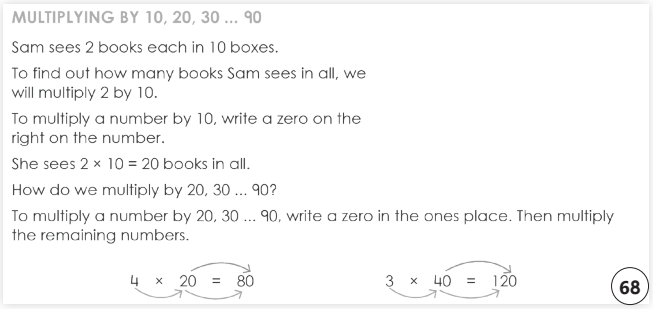
Teacher: Great work. Let us move ahead with today's lesson.

Multiplying by 10, 20, 30 …90

MUST DO
10 MIN.

Teacher: Open your books to page

68. We will discuss Multiplying by 10, 20, 30…90. Let us read the example together.


MULTIPLYING BY 10, 20, 30 ... 90

Sam sees 2 books each in 10 boxes.

To find out how many books Sam sees in all, we will multiply 2 by 10.

To multiply a number by 10, write a zero on the right on the number.

She sees 2 × 10 = 20 books in all.

How do we multiply by 20, 30 ... 90?

To multiply a number by 20, 30 ... 90, write a zero in the ones place. Then multiply the remaining numbers.

4 × 20 = 80 3 × 40 = 120

68

Teacher: If we multiply 2 by 10, we get 20. But what happens when we multiply by 20?

Teacher: Yes, we add a zero to the number and then multiply by 2.

Teacher: Let us try another one: 4 × 30. How will we solve this?

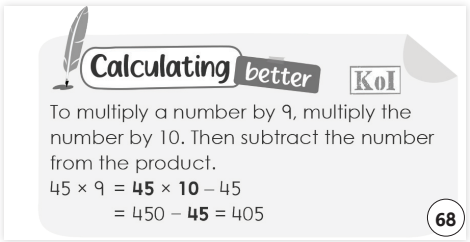
Teacher: That is right. First, multiply 4 × 3 = 12 and then add a zero at the end: 120.

Teacher: This method helps us multiply bigger numbers quickly. Let us practise more in the next activity.

Calculating better

Teacher: Let us move to the 'Calculating better' section given on page 68.

MUST DO 5 MIN.


Calculating better KoI

To multiply a number by 9, multiply the number by 10. Then subtract the number from the product.

45 × 9 = **45** × **10** – 45

= 450 – **45** = 405

68

Teacher: Here, we will learn a trick to multiply by 9 using 10.

Teacher: If we multiply a number by 10 and subtract the same number from it, we get the answer for 9 times the number.

Teacher: Let us try: 45 × 9.

Teacher: We first multiply 45 × 10 = 450. Now subtract 45 from it. What do we get?

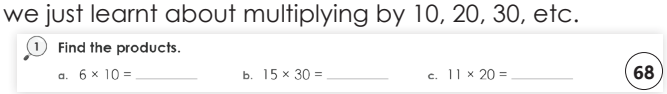
Teacher: Yes. 450 - 45 = 405.

Teacher: This is a great shortcut to use when multiplying by 9. Keep this trick in mind while solving problems.

Teacher: Now, solve the first two questions from Exercise 1.

MUST DO 5 MIN.

Teacher: Remember to apply what we just learnt about multiplying by 10, 20, 30, etc.


1 Find the products.

a. 6 × 10 = _____ b. 15 × 30 = _____ c. 11 × 20 = _____

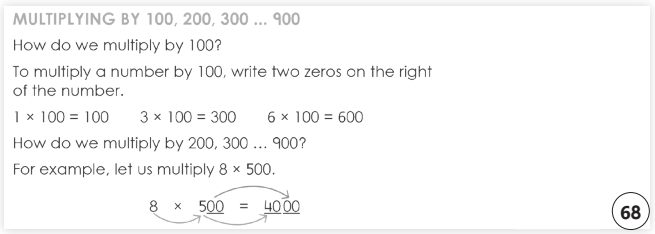
68

Teacher: Once done, check your answers with me.

Multiplying By 100, 200, 300 …900

Teacher: Let us move to the section on Multiplying by 100, 200, 300…900 given on page 68.

MUST DO 5 MIN.


MULTIPLYING BY 100, 200, 300 ... 900

How do we multiply by 100?

To multiply a number by 100, write two zeros on the right of the number.

1 × 100 = 100 3 × 100 = 300 6 × 100 = 600

How do we multiply by 200, 300 ... 900?

For example, let us multiply 8 × 500.

8 × 500 = 4000

68

Teacher: If multiplying by 10 adds one zero, what do we do when multiplying by 100?

Teacher: Yes. We add two zeros to the number.

Teacher: Let us try: 3 × 100.

Teacher: Yes, the answer is 300.

Teacher: Now, let us try 4 × 200. What will we do?

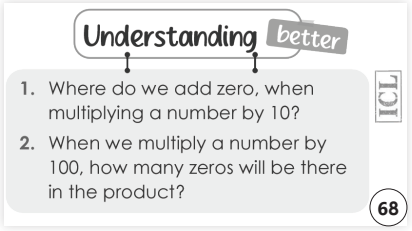
Teacher: First, multiply 4 × 2 = 8 and then add two zeros to get 800.

Teacher: This method helps us multiply large numbers quickly. Let us move to an activity to reinforce this.

Understanding better

Teacher: Let us move to the 'Understanding better' section given on page 68.

MUST DO 5 MIN.


Understanding better ICI

1. Where do we add zero, when multiplying a number by 10?
2. When we multiply a number by 100, how many zeros will be there in the product?

68

Teacher: Open your books to this section. Let us discuss these questions together.

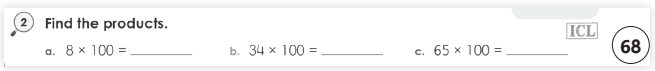
Teacher: Where do we add a zero when multiplying by 10?

Teacher: Yes, we add it to the right of the number.

Teacher: When we multiply a number by 100, how many zeros will be there in the product?

Teacher: Correct. There will be two zeros in the product.

Exercise 2


2 Find the products. ICL

a. 8 × 100 = _____ b. 34 × 100 = _____ c. 65 × 100 = _____

68

Teacher: Now, solve the first two questions from Exercise 2.

MUST DO 5 MIN.

Teacher: Apply what we have learnt about multiplying by 100, 200 and beyond.

Teacher: Once you have finished, check your answers with a classmate. Raise your hand if have any doubt.

Teacher: Well done, everyone. Let us give ourselves a huge round of applause for our hard work today.

Teacher: See you in the next class, keep practising.

Differentiated Activities

110 km/hr

Create two multiplication word problems using numbers 10, 20, 30 and so on 100. Exchange your

questions with a partner and solve each other's problems.

80 km/hr

Write three multiplication sums using numbers 10, 20, 30 and so on 100 and write their answers separately. Exchange your sums with a partner and solve each other's sums by matching them with the correct answers.

40 km/hr

Draw three groups of objects (e.g., 3 groups of 4 stars). Write a multiplication statement for each and exchange your drawings with a partner to solve.

Home Task

Solve question (c) of Exercise 1 and 2 given on page 68 in the Main Course Book.

Period 4

SHOULD DO — 5 MIN.

Teacher: Good morning students. How are you?

Teacher: Let us quickly recall what we learnt in the last class. I will ask a few multiplication questions and you will answer them as fast as you can.

Teacher: What is 6 × 20?

Teacher: Yes, 6 × 20 = 120.

Teacher: What happens when we multiply 4 × 100?

Teacher: Correct. 4 × 100 = 400.

Teacher: What do we do when multiplying a number by 10?

Teacher: Right. We add a zero to the right of the number.

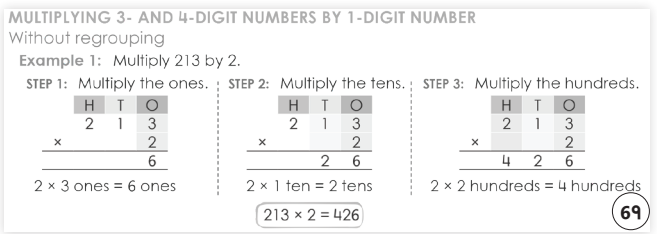
Teacher: Well done. Now, let us move ahead with today's lesson.

Multiplying 3 - and 4 - Digit Numbers by 1-Digit Numbers

Without regrouping

MUST DO — 5 MIN.

Teacher: Open your books to the section Multiplying 3- and 4-Digit Numbers by 1-Digit Numbers (Without Regrouping). Let us read the first example together.



Teacher: Look at 213 × 2. We will multiply each digit separately.

Teacher: First, multiply the ones: 3 × 2 = 6.

Teacher: Now multiply the tens: 1 × 2 = 2.

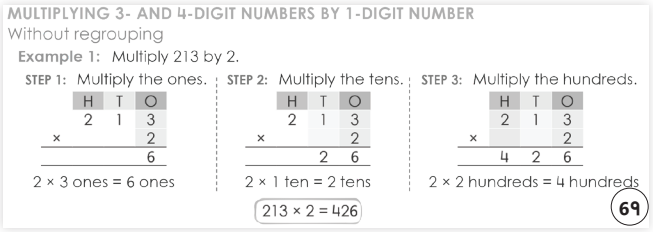
Teacher: Finally, multiply the hundreds: 2 × 2 = 4.

Teacher: So, the final product is 426. Since no digits were carried over, this is multiplication without regrouping.

With regrouping

MUST DO — 5 MIN.

Teacher: Now, let us move to 'Multiplication with Regrouping.' Look at 326 × 3 in your book.



Teacher: First, multiply the ones: 6 × 3 = 18. We cannot write 18 in the ones place, so we place 8 in the ones place and carry over 1 to the tens place.

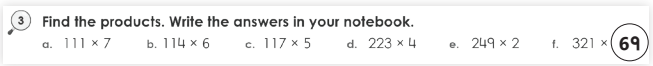
Teacher: Now, multiply the tens: 2 × 3 = 6. Add the carried - over 1, making it 7.

Teacher: Finally, multiply the hundreds: 3 × 3 = 9.

Teacher: So, the final product is 978. Since we had to carry over a digit, this is an example of multiplication with regrouping.

MUST DO — 10 MIN.

Teacher: Now, let us practise. Work with a partner and solve questions (a) to (d) from Exercise 3 in your notebooks.

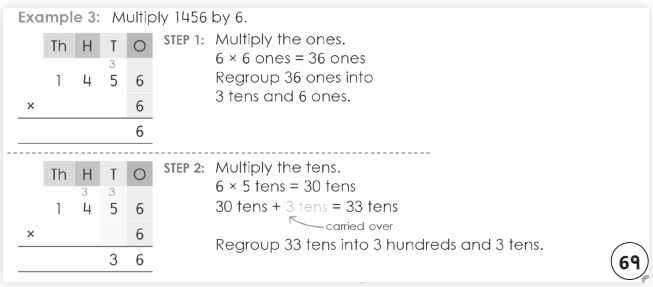


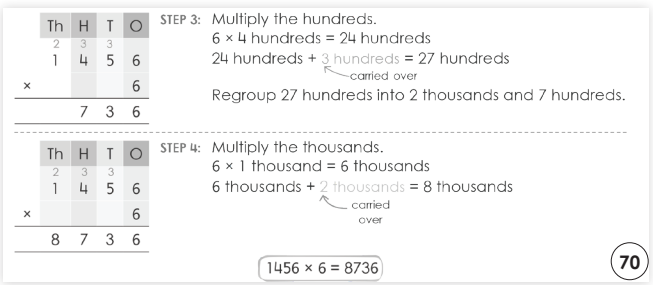
Teacher: Remember to follow the steps we just learnt - multiply the ones, tens and hundreds carefully.

Teacher: Once finished, exchange notebooks with your partner and check each other's answers.

MUST DO — 5 MIN.

Teacher: Now, let us look at a 4-digit number multiplication example. Open your book to Example 3: 1456 × 6.





Teacher: Let us go step by step.

Teacher: Multiply the ones: 6 × 6 = 36. Place 6 in the ones place and carry over 3 to the tens.

Teacher: Multiply the tens: 6 × 5 = 30. Add the carried-over 3, making it 33. Place 3 in the tens place and carry over 3 to the hundreds.

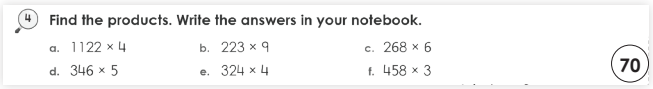
Teacher: Multiply the hundreds: 6 × 4 = 24. Add the carried-over 3, making it 27. Place 7 in the hundreds place and carry over 2 to the thousands.

Teacher: Multiply the thousands: 6 × 1 = 6. Add the carried-over 2, making it 8.

Teacher: So, the final product is 8736. Discuss this example with a partner.

Teacher: Now, work in pairs and solve questions (a) to (d) from Exercise 4 in your notebooks.

MUST DO
5 MIN.


4 Find the products. Write the answers in your notebook.
a. 1122 × 4 b. 223 × 9 c. 268 × 6
d. 346 × 5 e. 324 × 4 f. 458 × 3
70

Teacher: Let us try solving 1122 × 4 together before you start.

Teacher: First, multiply the ones: 2 × 4 = 8.

Teacher: Next, multiply the tens: 2 × 4 = 8.

Teacher: Multiply the hundreds: 1 × 4 = 4.

Teacher: Finally, multiply the thousands: 1 × 4 = 4. So, the answer is 4488.

Teacher: Now, solve the remaining questions and I will move around to discuss your doubts.

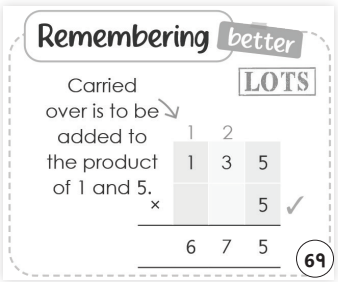
Remembering better

MUST DO
5 MIN.

Teacher: Let us move to the 'Remembering better' section on page 69.

Teacher: Why do we carry over a number while multiplying?

Teacher: Yes. Because sometimes the product of a multiplication step is more than 9 and we need to place extra digits in the next place value.


Remembering better
LOTS
Carried over is to be added to the product of 1 and 5.
1 2
1 3 5
× 5 ✓
6 7 5
69

Teacher: If we multiply a number by 0, what will be the answer?

Teacher: Correct. The answer is always 0.

Teacher: These rules help us solve multiplication problems more easily. Keep them in mind while practising.

Teacher: You all worked really well today. We learnt how to multiply 3- and 4-digit numbers by a 1-digit number, with and without regrouping.

Teacher: Let us give ourselves a huge round of applause for our hard work today. See you in the next class. Keep practising.

Differentiated Activities

110 km/hr

Create a 3-digit multiplication word problem and exchange it with a partner to solve.

80 km/hr

Write three 3-digit multiplication sums with answers separately. Exchange with a partner and match the sums with the correct answers.

40 km/hr

Write two 3-digit multiplication sums with answers separately with a partner. Exchange with another pair and match the sums with the correct answers.

Home Task

Solve questions (e) and (f) of Exercise 3 and 4. Write the answers neatly I your notebook.

Period 5

SHOULD DO
5 MIN.

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

Teacher: Before we begin today's lesson, let us recall some concepts from our previous chapter. Answer quickly.

Teacher: What happens when we add zero to a number? Does it change?

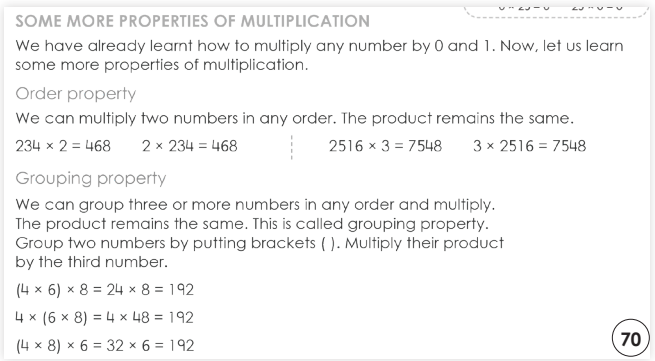
Teacher: Correct. The number remains the same.

Teacher: If we subtract a number from itself, what is the answer?

Teacher: Yes. The answer is always zero.

Teacher: Great answers, everyone. Now, let us move ahead with today's topic.

Some More Properties of Multiplication


SOME MORE PROPERTIES OF MULTIPLICATION
We have already learnt how to multiply any number by 0 and 1. Now, let us learn some more properties of multiplication.
Order property
We can multiply two numbers in any order. The product remains the same.
234 × 2 = 468 2 × 234 = 468 | 2516 × 3 = 7548 3 × 2516 = 7548
Grouping property
We can group three or more numbers in any order and multiply. The product remains the same. This is called grouping property. Group two numbers by putting brackets ( ). Multiply their product by the third number.
(4 × 6) × 8 = 24 × 8 = 192
4 × (6 × 8) = 4 × 48 = 192
(4 × 8) × 6 = 32 × 6 = 192
70

Order Property

MUST DO
10 MIN.

Teacher: Open your books to page 70. Today, we will learn properties of multiplication. Let us start with the order property.

Teacher: The order property tells us that we can multiply two numbers in any order and the product remains the same. Look at this example:

234 × 2 = 468 and 2 × 234 = 468

Teacher: Do both answers remain the same?

Teacher: Yes. This means we can multiply in any order without changing the result.

Grouping property

Teacher: Now, let us look at the grouping property. This tells us that we can group three or more numbers in any

order while multiplying and the product remains the same.

Teacher: : Look at the example in your book:

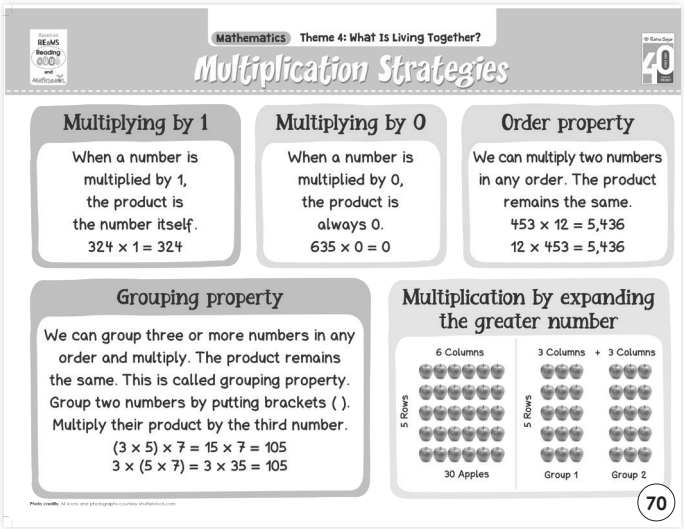
$(4 \times 6) \times 8 = 24 \times 8 = 192$

$4 \times (6 \times 8) = 4 \times 48 = 192$

Teacher: : The answer does not change no matter how we group the numbers.

Teacher: : These properties make multiplication easier and help us solve problems in different ways.

Poster



Teacher: : Look at this Multiplication Strategies poster. What do you see? Can you find any multiplication property we have discussed?

MUST DO

5 MIN.

Teacher: : Yes. This poster shows different multiplication properties that help us calculate easily. Let us discuss them together.

Teacher: : What happens when we multiply a number by 1?

Teacher: : Correct. The answer remains the same. This is called the Multiplication by 1 property.

Teacher: What happens when we multiply a number by 0?

Teacher: That is right. The product is always 0.

Teacher: What do you understand from the Order Property?

Teacher: Good. The Order Property tells us that changing the order of numbers does not change the product.

Teacher: What about the Grouping Property? Can we change the grouping while multiplying?

Teacher: Absolutely. The Grouping Property allows us to change the way we group numbers, but the product remains the same.

Teacher: Well done. Now, let us move to an interesting activity

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

Teacher: Now, we will play a multiplication matching game.

COULD DO

10 MIN.

Teacher: I will give each of you a multiplication statement on a card (e.g., 3 × 4, (2 × 5) × 6). Some of you will get answer cards.

Teacher: Walk around and find the partner who has the correct answer for your multiplication statement.

Teacher: : Once you find your match, discuss with each other which property of multiplication is being used.

Teacher: Who can explain how this activity will help us in multiplication?

Teacher: Excellent. It helps us understand multiplication in different ways. Now, let us begin.

(Students move around and match their cards.)

Teacher: Great work. You all matched the multiplication statements correctly. Now, let us discuss what we learnt from this activity.

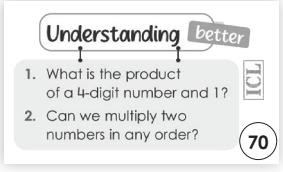
Understanding better

Teacher: Open your books to the 'Understanding better' section on page 70. Read the first question. Who can answer it?

MUST DO

5 MIN.

Teacher: Yes. The product is always the number itself.



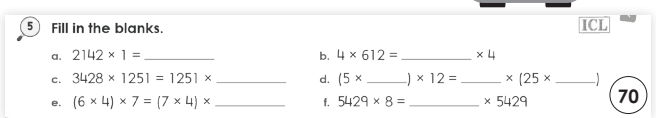
Teacher: Now, read the second question. Can we multiply two numbers in any order? What do you think?

Teacher: Correct. Yes, because the product remains the same. This is called the order property of multiplication.

Teacher: Now, solve the Fill in the Blanks questions from Exercise 5.

MUST DO

5 MIN.



Teacher: Let us solve one together. Look at question (a) 2142 × 1 = _____

Teacher : What will be the answer?

Teacher: Yes. The answer is 2142 because when we multiply by 1, the number remains the same.

Teacher: Now, solve the rest of the questions. I will move around the classroom to discuss any doubts you have.

Teacher: You all worked really well today. Who can tell me one thing they learnt today?

Teacher: Let us give ourselves a huge round of applause for our hard work today. See you in the next class. Keep practising.

Differentiated Activities

110 km/hr

Create two multiplication statements that show the order property and grouping property. Exchange them with a partner to solve.

80 km/hr

Write four multiplication statements and rewrite them by changing the order of numbers. Solve both versions and check if the product remains the same.

40 km/hr

Draw three groups of objects (e.g., 2 groups of 5 apples). Write two multiplication statements using different orders and solve them.

Home Task

Write two real-life situations where the order property or grouping property of multiplication is used and solve them.

Period 6

SHOULD DO

5 MIN.

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

Teacher: Before we begin, let us recall the properties of multiplication from our previous class. I will ask a few questions. Think carefully and answer.

Teacher: If I multiply 15 × 7 and 7 × 15, will the answers be the same or different? Why?

Teacher: Yes. The answer will be the same. This is because of the order property, which tells us that the order of multiplication does not change the product.

Teacher: If I multiply 1325 × 1, what will the answer be?

Teacher: Correct. The answer is 1325. This is the identity property, which states that any number multiplied by 1 remains the same.

Teacher: If I multiply (4 × 6) × 5 and 4 × (6 × 5), will the answer change? Why or why not?

Teacher: Great. The answer will stay the same because of the grouping property, which allows us to group numbers in any order while multiplying.

Teacher: If I multiply 456 × 0, what will be the answer?

Teacher: Yes. The answer is 0. This is the zero property, which means any number multiplied by 0 always results in 0.

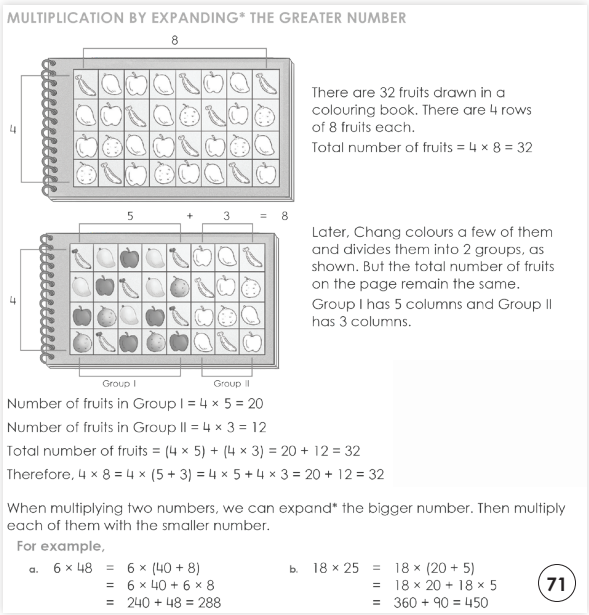
Teacher: Wonderful answers, everyone. Now, let us move ahead with today's lesson.

Multiplication by Expanding the Greater Number

MUST DO

10 MIN.

Teacher: Open your books to page 71. Look at the picture of fruits in a notebook. Can anyone explain what is happening in the first image?



Teacher: Yes. There are 4 rows of 8 fruits each, so the total number of fruits is 4 × 8 = 32.

Teacher: Now, look at the second picture. The fruits have been grouped into two parts. What do you notice?

Teacher: That is correct. The total number of fruits is still the same, but we split the 8 fruits into two smaller numbers: 5 and 3.

Teacher: Let us understand this through an example. What do you think will happen if we multiply 6 × (40 + 8) instead of 6 × 48?

Teacher: Good thinking. Instead of multiplying 6 by 48 at once, we split 48 into 40 and 8 and solve it step by step.

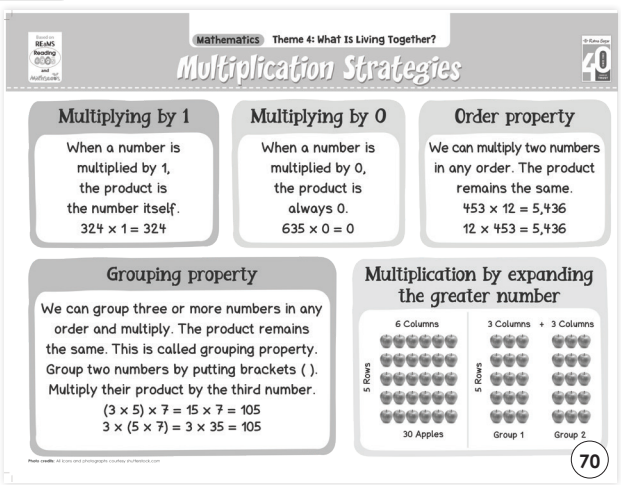
6 × 48 = (6 × 40) + (6 × 8) = 240 + 48 = 288

Teacher: This method makes multiplication easier, especially for larger numbers.

MUST DO

5 MIN.

Poster



Teacher: Look at this poster. It explains different ways of solving multiplication problems using expansion. Who can explain how this method works?

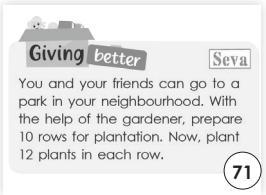
(Student responses)

Teacher: Yes. When multiplying two numbers, we break the bigger number into parts to make calculations easier.
Teacher: Can anyone give me another example using this method?
Teacher: Well done. This is a great way to simplify multiplication.

Giving better

SHOULD DO 5 MIN.

Teacher: Let us look at the 'Giving better' section on page 71. It talks about an interesting activity we can try outside the classroom.
Teacher: Imagine you are planting 10 rows of trees in a park and each row has 12 trees. How many trees will there be in total?
(Student responses)
Teacher: Yes. 10 × 12 = 120 trees.
Teacher: Now, if we divide the 12 trees into two groups, 10 and 2, how will the multiplication work?
(Student responses)


Giving better Seva
You and your friends can go to a park in your neighbourhood. With the help of the gardener, prepare 10 rows for plantation. Now, plant 12 plants in each row.
71

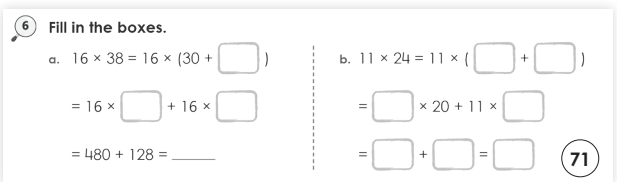
Teacher: Correct. We can multiply like this:
(10 × 10) + (10 × 2) = 100 + 20 = 120
Teacher: This shows how expanding the greater number helps in real-life situations.
You may show the **Toys from Trash** given on digital platform.

COULD DO 5 MIN.

Teacher: Now, let us play a multiplication expansion challenge.
Teacher: I will write a multiplication statement on the board and you will work in pairs to break down the bigger number and solve it.
Teacher: Here is your first question: 9 × 46. Break it down and solve it using expansion.
(Student responses)
Teacher: Excellent. 9 × 46 = (9 × 40) + (9 × 6) = 360 + 54 = 414.
Teacher: Now, try solving 7 × 52 using the same method. Discuss with your partner and find the answer.
(Student responses)
Teacher: Well done. Expanding the greater number helps in breaking down large numbers into smaller, manageable parts.

MUST DO 5 MIN.

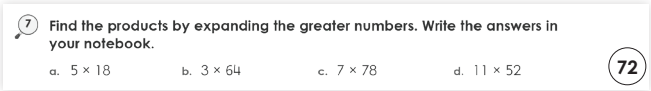
Teacher: Now, solve the Fill in the Boxes section in Exercise 6.


6 Fill in the boxes.
a. 16 × 38 = 16 × (30 + ☐)
= 16 × ☐ + 16 × ☐
= 480 + 128 = ____
b. 11 × 24 = 11 × (☐ + ☐)
= ☐ × 20 + 11 × ☐
= ☐ + ☐ = ☐
71

Teacher: Let us do one together. Look at question (a) 16 × 38. How can we expand 38?
(Student responses)
Teacher: Yes. We can split it into 30 and 8, then multiply:
(16 × 30) + (16 × 8) = 480 + 128 = 608
Teacher: Now, solve the remaining questions in your notebooks. I will walk around and help you if needed

MUST DO 5 MIN.

Teacher: Now, solve questions (a) and (b) of Exercise 7. Remember to expand the greater number before multiplying.


7 Find the products by expanding the greater numbers. Write the answers in your notebook.
a. 5 × 18 b. 3 × 64 c. 7 × 78 d. 11 × 52
72

Teacher: Let us try solving question (a) 5 × 18 together. How can we expand 18?
Teacher: Yes. 18 = 10 + 8, so 5 × 18 = (5 × 10) + (5 × 8) = 50 + 40 = 90
Teacher: Now, solve question (b) on your own. I will move around and help you if needed.

Differentiated Activities

110 km/hr
Create two multiplication problems using expansion. Exchange with a partner and solve each other's questions.

80 km/hr
Solve three given multiplication statements using expansion and compare the answers with a partner.

40 km/hr
Draw groups of objects and break them into two smaller groups to represent multiplication using expansion.

Home Task

Solve questions (c) and (d) of Exercise 7 given on page 72. Write the answers in your notebook using the expansion method.

Period 7

SHOULD DO 5 MIN.

Teacher: Good morning, students. How are you today?
Teacher: Before we begin, let us quickly review what we learnt in the previous class on multiplying by expanding the greater number. I will ask a few questions. Think carefully and answer.
Teacher: If I multiply 5 × 18 by expanding the greater number, how would we break down 18?
Teacher: Yes. We can break 18 as (10 + 8). So, 5 × 18 = (5 × 10) + (5 × 8) = 50 + 40 = 90.
Teacher: Now, if I multiply 3 × 64 by expanding 64, how would we break it down?
Teacher: Correct. We can break 64 into (60 + 4). So, 3 × 64 = (3 × 60) + (3 × 4) = 180 + 12 = 192.

Teacher: What happens if we expand 259 × 35? How would we break down 35?

Teacher: Yes. We break 35 into (30 + 5). So, 259 × 35 = (259 × 30) + (259 × 5). Let us calculate it together.

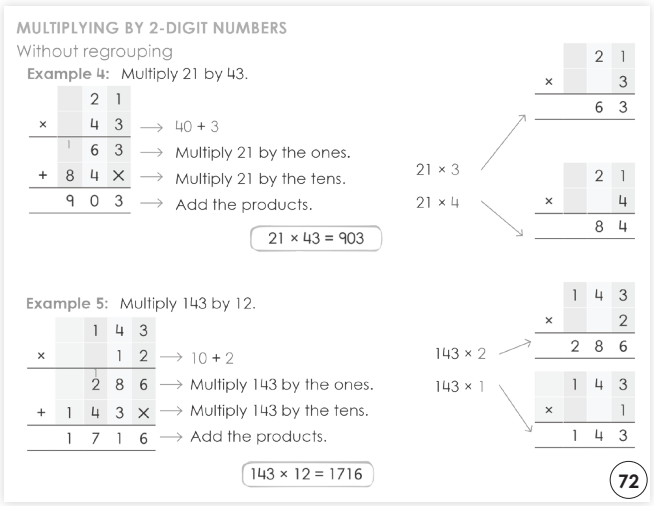
Teacher: Great work. Now, let us move ahead with today's lesson.

Multiplying by 2 - Digit Numbers

Without regrouping

Teacher: Open your books to page 71. Let us look at Example 4: Multiply 21 by 43.

MUST DO
10 MIN.



Teacher: We will first multiply 21 by the ones digit of 43, which is 3. What is 21 × 3?

Teacher: Yes, 21 × 3 = 63. Now, we multiply 21 by the tens digit of 43, which is 4. What is 21 × 4?

Teacher: Correct. 21 × 4 = 84.

Teacher: Now, let us add the two products together. What do we get when we add 63 and 840?

Teacher: Yes, 63 + 840 = 903. So, 21 × 43 = 903.

Teacher: Let us move on to Example 5: Multiply 143 by 12.

Teacher: First, let us multiply 143 by the ones digit of 12, which is 2. What is 143 × 2?

Teacher: Correct, 143 × 2 = 286. Now, multiply 143 by the tens digit of 12, which is 1. What is 143 × 1?

Teacher: Yes, 143 × 1 = 143.

Teacher: Now, let us add the two products together. What do we get when we add 286 and 1430?

Teacher: Right. 286 + 1430 = 1716. So, 143 × 12 = 1716.

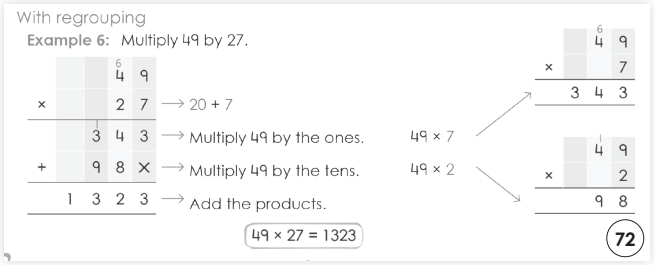
Teacher: Now, let us pair up and discuss how we can apply these steps to similar problems.

Multiplying By 2 – Digit Numbers

With regrouping

Teacher: Let us now move on to Multiplying by 2-digit numbers with regrouping. Open your books to Example 6: Multiply 49 by 27.

MUST DO
10 MIN.



Teacher: First, we multiply 49 by the ones digit of 27, which is 7. What is 49 × 7?

Teacher: Correct. 49 × 7 = 343. Now, multiply 49 by the tens digit of 27, which is 2. What is 49 × 2?

Teacher: Yes, 49 × 2 = 98.

Teacher: Now, let us add the two products. What do we get when we add 343 and 980?

Teacher: Yes. 343 + 980 = 1323. So, 49 × 27 = 1323.

Teacher: Let us look at Example 7: Multiply 259 by 35.

Teacher: First, multiply 259 by the ones digit of 35, which is 5. What is 259 × 5?

Teacher: Correct. 259 × 5 = 1295. Now, multiply 259 by the tens digit of 35, which is 3. What is 259 × 3?

Teacher: Yes, 259 × 3 = 777.

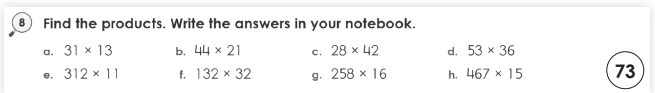
Teacher: Now, let us add the two products. What do we get when we add 1295 and 7770?

Teacher: Right. 1295 + 7770 = 9065. So, 259 × 35 = 9065.

Teacher: Now, let us pair up and discuss how we can apply these steps to similar problems.

Teacher: Let us work on Exercise 8. Solve questions (a) to (e) in your notebooks. I will walk around to help you if needed.

MUST DO
10 MIN.



Teacher: After you finish, I want you to check your answers with a partner and discuss the solution.

Teacher: Now, it is time for our 'Maths Relay Race'. Are you all ready?

SHOULD DO
5 MIN.

Teacher: I will divide the class into two teams. Each team will take turns answering the questions. The first team to answer correctly will move forward. The team that finishes first wins.

Teacher: Here is your first question:

Teacher: What is 21 × 43?

(First team answers)

Teacher: Correct. Move forward one step.

Teacher: Next question:

Teacher: What is 49 × 27?

(Second team answers)

Teacher: Well done. Move forward one step.

(Give more questions in the similar way.)

Teacher: And the winning team is… (Name the winning team). Well done, everyone. Let us give a huge round of applause to both teams. See you in the next class.

Differentiated Activities

110 km/hr

Create two sums by multiplying 2-digit number and explain the steps involved. Exchange with a partner and solve.

80 km/hr

Write three multiplication questions by multiplying 2-digit numbers with a partner. Exchange the questions with another pair and solve them.

40 km/hr

Draw groups of objects to represent the multiplication of 2-digit numbers and explain your steps to a partner.

Home Task

Solve questions (f) to (h) of Exercise 8 given on page 73. Write the answers in the notebook.

Period 8

SHOULD DO — 5 MIN.

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

Teacher: Before we begin today's lesson, let us quickly review what we learnt in the last period. We were working on multiplying by 2-digit numbers. I will ask a few questions based on that.

Teacher: If we multiply 21 by 43, what do we do first?

Teacher: Yes. We first multiply 21 by the ones digit of 43, which is 3. So, 21 × 3 = 63.

Teacher: Now, when we multiply 21 by the tens digit of 43, which is 4, what is the result?

Teacher: Correct. 21 × 4 = 84. Then, we add the products and the final answer is 903.

Teacher: If we multiply 143 by 12, what do we do first?

Teacher: Yes, we multiply 143 by 2, then by 10. Let's break it down:

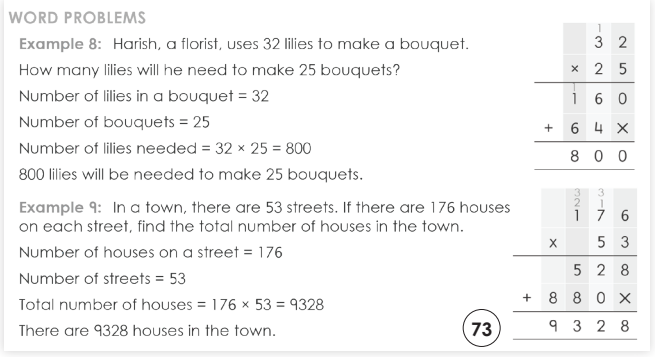
143 × 2 = 286

143 × 10 = 1430

Now, we add them together: 286 + 1430 = 1716.

Teacher: Great. Now that we have revisited it, let us move ahead with today's lesson.

Word Problems



WORD PROBLEMS

Example 8: Harish, a florist, uses 32 lilies to make a bouquet.
How many lilies will he need to make 25 bouquets?
Number of lilies in a bouquet = 32
Number of bouquets = 25
Number of lilies needed = 32 × 25 = 800
800 lilies will be needed to make 25 bouquets.

		1	3	2
	×	2	5	
	1	6	0	
+	6	4	×	
	8	0	0	

Example 9: In a town, there are 53 streets. If there are 176 houses on each street, find the total number of houses in the town.
Number of houses on a street = 176
Number of streets = 53
Total number of houses = 176 × 53 = 9328
There are 9328 houses in the town.

	3 2	3 1	
	1	7	6
×		5	3
	5	2	8
+	8	8	0 ×
	9	3	2	8

73

MUST DO — 10 MIN.

Teacher: Today, we are going to practise word problems that involve multiplying numbers. These types of problems help us understand how multiplication works in real life. Let me give you some examples.

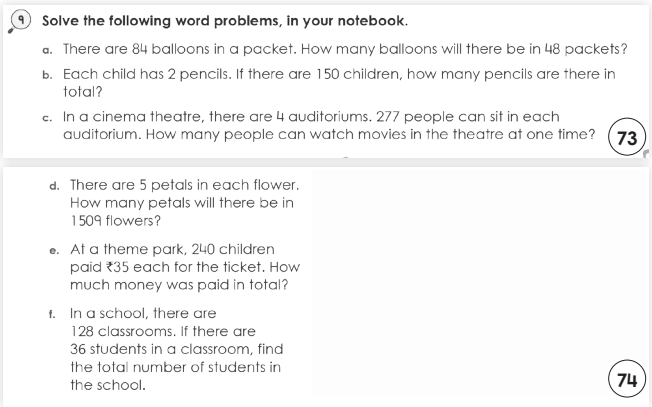
Teacher: Example 8: Harish, a florist, uses 32 lilies to make a bouquet. How many lilies will he need to make 25 bouquets?

Teacher: This is an example of how we can use multiplication to solve real-life problems like this. To find out how many lilies Harish needs, we will multiply the number of lilies in each bouquet (32) by the number of bouquets (25),

Teacher: Now, let us solve this together:

Teacher: 32 × 25 = 800 lilies. So, Harish will need 800 lilies to make 25 bouquets.

(Discuss the example 9 in the similar way.)



9 **Solve the following word problems, in your notebook.**

a. There are 84 balloons in a packet. How many balloons will there be in 48 packets?

b. Each child has 2 pencils. If there are 150 children, how many pencils are there in total?

c. In a cinema theatre, there are 4 auditoriums. 277 people can sit in each auditorium. How many people can watch movies in the theatre at one time?

73

d. There are 5 petals in each flower. How many petals will there be in 1509 flowers?

e. At a theme park, 240 children paid ₹35 each for the ticket. How much money was paid in total?

f. In a school, there are 128 classrooms. If there are 36 students in a classroom, find the total number of students in the school.

74

MUST DO — 10 MIN.

Teacher: Open your books to Exercise 9 given on page 73 and solve questions from (a) to (d) in your notebooks.

Teacher: You can discuss the question with your partner. I will walk around to help you if needed.

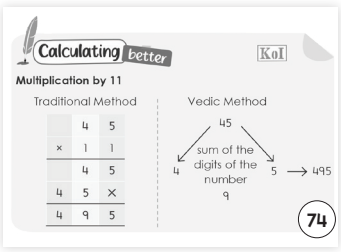
Teacher: After you finish, check your answers with a partner.

(Use **CRM signs** to settle the class.)

Calculating better

MUST DO — 5 MIN.

Teacher: Let us now look at 'Calculating better'. We will practise multiplying by 11 using both the traditional method and the Vedic method.



Calculating better

KoI

Multiplication by 11

Traditional Method

	4	5
×	1	1
	4	5
4	5	×
4	9	5

Vedic Method

45

4 — sum of the digits of the number 9 — 5 → 495

74

(Discuss the methods with students.)

Connecting better

Teacher: Let us now discuss 'Connecting better'. In this section, we learn how to link multiplication with real-life scenarios.

MUST DO
5 MIN.


Connecting better
Sam looks at a woman as they walk through the mall. She sees that the woman is wearing a silk saree. Sam tells her mum, "She looks so pretty in this saree." Mum replies, "It is a *Kanchipuram* saree. Do you know in which place it is most famous?" Sam says, "Tamil Nadu." Mum pats Sam on her back.
Social Studies
74

Teacher: For example, Sam sees a woman wearing a beautiful silk saree and asks her mum about it. They talk about the famous Kanchipuram saree from Tamil Nadu.

Teacher: This shows how we can connect everyday life with the concepts we learn. Can you think of any other places famous for something special?

Grasping better


Grasping better
DING
expand: here, show numbers as per their place values
74

Teacher: Let us now revisit the term 'expand.' Who will explain the term?

Teacher: Correct, for example, the number 45 can be expanded as 40 + 5.

Doubt session

SHOULD DO
5 MIN.

Teacher: Now, let us take a few minutes to address any doubts you may have.

Teacher: If you have any questions regarding the exercises or concepts we discussed, feel free to ask.

Teacher: Let us give ourselves a huge round of applause for our hard work today. See you in the next class. Keep practising.

Differentiated Activities

110 km/hr

Create two multiplication word problems based on real-life scenarios. Solve them using the steps we learnt.

80 km/hr

Write three multiplication questions involving 2-digit numbers. Solve them with a partner.

40 km/hr

Draw pictures or diagrams to represent multiplication problems. Share the steps involved to your partner

Home Task

Exercise 9

Solve question (d) of Exercise 9 given on page 74. Write the answers in your notebook.

Period 9

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

SHOULD DO
5 MIN.

Teacher: Before we begin today's lesson, let us quickly review word problems on multiplication. I will ask you a few questions. Think carefully and answer.

Teacher: The first word problem is: If there are 84 balloons in a packet, how many balloons will there be in 4 packets?

Teacher: Yes. To solve this, we multiply 84 × 4. The total will be 336 balloons.

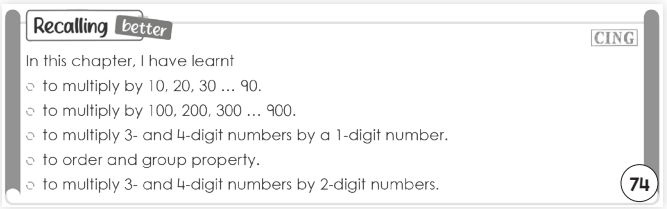
Teacher: Here is the second word problem: Each child has 2 pencils. If there are 150 children, how many pencils are there in total?

(Student responses)

Teacher: Correct. To solve this, we multiply 2 × 150, which equals 300 pencils.

Teacher: Great. Now that we have warmed up, let us move ahead with today's lesson.

Recalling better


Recalling better
CING
In this chapter, I have learnt
- to multiply by 10, 20, 30 ... 90.
- to multiply by 100, 200, 300 ... 900.
- to multiply 3- and 4-digit numbers by a 1-digit number.
- to order and group property.
- to multiply 3- and 4-digit numbers by 2-digit numbers.

74

MUST DO
15 MIN.

Teacher: Let us now begin with 'Recalling better'. In this section, we will review some key multiplication concepts.

Teacher: Let us recall the rules we learnt. For example, when multiplying by 10, 20, 30 and so on, the number just gets multiplied by the number of zeros at the end. What happens when we multiply a number by 100, 200 or 300?

Teacher: Yes. The number increases and you add the corresponding zeros.

Teacher: Let us move on to the Order Property. When we multiply 2 numbers in any order, will the product remain the same?

Teacher: Yes. For example, 3 × 4 = 12 and 4 × 3 = 12. The product remains the same.

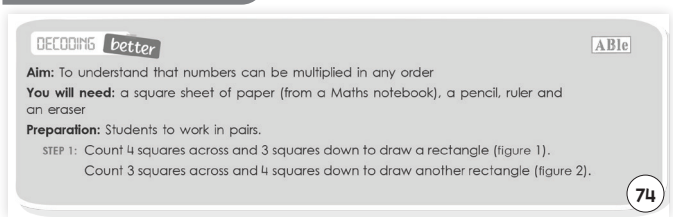
Teacher: Now, let us practise some more examples. Can we multiply 3 × 3 × 4 in any order?

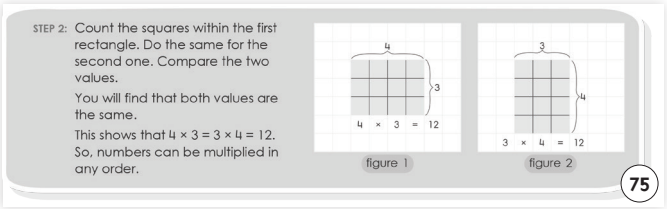
(Student responses)

Teacher: Yes. Whether we do (3 × 3) × 4 or 3 × (3 × 4), the product will be the same

(Discuss more questions with the students in the similar way.)

Decoding better


DECODING better
ABle
Aim: To understand that numbers can be multiplied in any order
You will need: a square sheet of paper (from a Maths notebook), a pencil, ruler and an eraser
Preparation: Students to work in pairs.
STEP 1: Count 4 squares across and 3 squares down to draw a rectangle (figure 1).
Count 3 squares across and 4 squares down to draw another rectangle (figure 2).
74

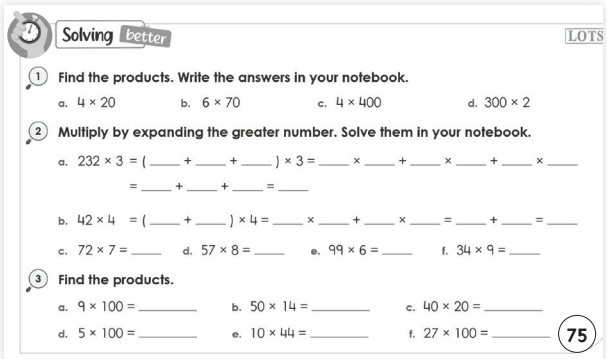

STEP 2: Count the squares within the first rectangle. Do the same for the second one. Compare the two values.
You will find that both values are the same.
This shows that 4 × 3 = 3 × 4 = 12. So, numbers can be multiplied in any order.
figure 1
figure 2
75

Teacher: Now, let us move on to 'Decoding better. 'We are going to draw some shapes to represent multiplication.

MUST DO
10 MIN.

(Guide the students to complete the activity.)

Solving better


Solving better
LOTS
1. Find the products. Write the answers in your notebook.
a. 4 × 20 b. 6 × 70 c. 4 × 400 d. 300 × 2
2. Multiply by expanding the greater number. Solve them in your notebook.
a. 232 × 3 = (____ + ____ + ____) × 3 = ____ × ____ + ____ × ____ + ____ × ____
= ____ + ____ + ____ = ____
b. 42 × 4 = (____ + ____) × 4 = ____ × ____ + ____ × ____ = ____ + ____ = ____
c. 72 × 7 = ____ d. 57 × 8 = ____ e. 99 × 6 = ____ f. 34 × 9 = ____
3. Find the products.
a. 9 × 100 = _____ b. 50 × 14 = _____ c. 40 × 20 = _____
d. 5 × 100 = _____ e. 10 × 44 = _____ f. 27 × 100 = _____
75

Teacher: Let us now move to 'Solving better.' We will solve problems based on multiplication.

MUST DO
10 MIN.

Teacher: Solve the following problems in your notebooks:

(Guide the students to complete Exercise 1 and 2.)

Teacher: Let us give ourselves a huge round of applause for our hard work today.

Teacher: See you in the next class. Keep practising.

Differentiated Activities

110 km/hr

Create a multiplication story. For example, you could write a story where a shopkeeper is selling pencils in boxes and you have to calculate how many pencils he sells in total. Use 2-digit numbers in your story and show how you can solve it step by step. Once completed, share your story with a partner to solve.

80 km/hr

Design a game where you create multiplication problems by drawing objects in rows and columns. For example, draw rows of apples and count 'how many apples are there in total?' using multiplication. Exchange your drawings with a partner and solve each other's problems.

40 km/hr

Draw pictures to represent multiplication problems, such as 4 × 2. Use objects like circles or squares to show how you can count them. Once you have completed your drawing, explain your method to a partner so they can solve similar problems.

Home Task

Solve Exercise 3 of Solving better given on page 75 in the Main Course Book.

Period 10

SHOULD DO
5 MIN.

Teacher: Before we begin today's lesson, let us play a fun and quick game to warm up. This will help us get our minds ready for solving multiplication problems.

Teacher: I will give you some multiplication questions, but with a twist. You need to tell me the answer in less than 5 seconds. Ready? Here we go.

Teacher: What is 15 × 6?

Teacher: Correct. 90. Let us move quickly.

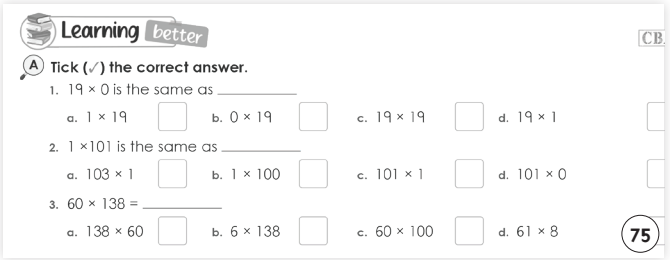
Teacher: What is 14 × 9?

Teacher: Yes. 126. Well done.

(Give more questions in the similar way.)

Teacher: Great work, everyone. You have warmed up your brain. Let us move ahead with today's lesson.

Learning better


Learning better
CB
A Tick (✓) the correct answer.
1. 19 × 0 is the same as _____
a. 1 × 19 b. 0 × 19 c. 19 × 19 d. 19 × 1
2. 1 ×101 is the same as _____
a. 103 × 1 b. 1 × 100 c. 101 × 1 d. 101 × 0
3. 60 × 138 = _____
a. 138 × 60 b. 6 × 138 c. 60 × 100 d. 61 × 8
75

Teacher: Let us now begin with 'Learning better.' We will practise identifying the correct multiplication from multiple options.

MUST DO
10 MIN.

Teacher: Let us start with Exercise A. Tick the correct answer for each question.

Teacher: For example, question 1: 19 × 0 is the same as:

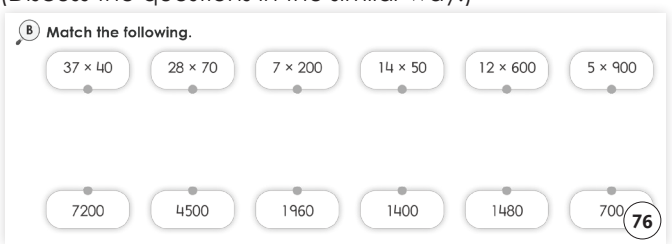
Teacher: If you think the correct answer is a. 1 × 19, show 1 finger. If you think the correct answer is b. 0 × 19, show 2 fingers. If you think the correct answer is c. 19 × 9, show 3 fingers.

If you think the correct answer is d. 19 × 1, show 4 fingers.

Teacher: Yes. The correct answer is b. 0 × 19 because any number multiplied by 0 is 0.

Teacher: Let us continue with the remaining questions. Please raise your fingers for the correct answers.

(Discuss the questions in the similar way.)


B Match the following.
37 × 40 28 × 70 7 × 200 14 × 50 12 × 600 5 × 900
7200 4500 1960 1400 1480 700
76

Teacher: Now, let us move on to Exercise B. In this section, you will match the following multiplication problems with their results.

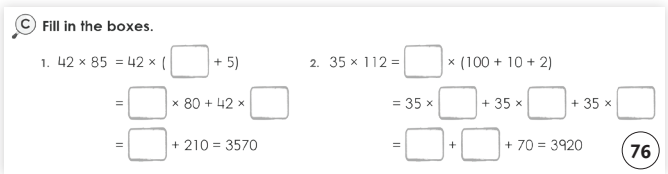
MUST DO 10 MIN.

Teacher: For example, match 37 × 40 with its result. What do we get when we multiply 37 × 40?

Teacher: If you think the correct answer is 7200, show 1 finger. If you think the correct answer is 7400, show 2 fingers. If you think the correct answer is 7500, show 3 fingers.

Teacher: Correct. The answer is 7200.

Teacher: Now, match the remaining multiplication problems and their results. I will walk around to help you if needed.



Teacher: Let us now move on to Exercise C. For question 1, you need to fill in boxes for the multiplication problem.

MUST DO 10 MIN.

Teacher: For example: 42 × 85 = 42 × (_____ + 5)

Teacher: Take a moment and write the correct numbers in the boxes. Solve the multiplication step-by-step, breaking 85 into 80 + 5. After that, explain your method to a partner.

Teacher: Now, let us take a short break and practise some calming meditation. Close your eyes, sit still and take deep breaths.

COULD DO 5 MIN.

Teacher: That was a great class, everyone. You all worked hard and did well with the multiplication problems.

Teacher: Now, take a moment to stretch your arms and relax. We will meet again in the next class.

Teacher: Thank you for your focus and effort today. Well done.

Differentiated Activities

110 km/hr

Design a 'multiplication puzzle' on paper. Write a multiplication problem, such as 42 × 5 and break it down into smaller steps, but leave some steps blank. Your partner must fill in the blanks and solve the problem.

80 km/hr

Create a multiplication board game. Draw a game board with spaces numbered 1–20. Each space contains a multiplication problem (e.g., 6 × 7). Roll the dice, solve the problem on the space you land on and move forward. Work with a partner and play together.

40 km/hr

Write down multiplication problems on cards and draw a picture for each (e.g., 4 × 3 with a picture of 4 rows of 3 apples). Share these cards with a partner and explain how the pictures represent the multiplication problem.

Home Task

Solve question 2 of Exercise C given on page 76 in the Main Course Book.

Period 11

Teacher: Good morning students. How are you?

SHOULD DO 5 MIN.

Teacher: Before we begin today's lesson, let us review multiplication from the last Period with a quick exercise.

Teacher: I will write a multiplication problem on the board and you need to solve it as quickly as possible. Ready?

Teacher: Solve 42 × 3.

Teacher: If you think the answer is 126, raise your right hand. If you think the answer is 130, raise your left hand.

Teacher: Yes, the correct answer is 126. Well done.

Teacher: Solve 31 × 4.

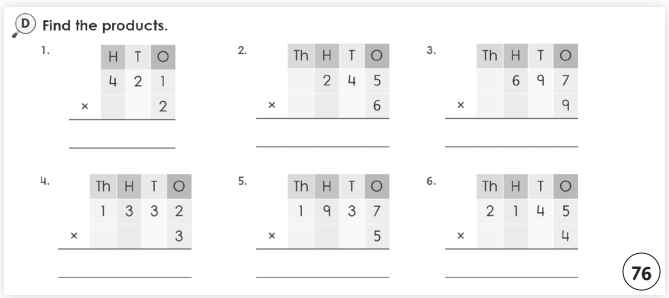
Teacher: If you think the answer is 124, raise your right hand. If you think the answer is 130, raise your left hand.

Teacher: Correct. The answer is 124.

Teacher: Great. Now that we have warmed up, let us move ahead with today's lesson.

Teacher: Let us now begin with Exercise D. Solve the following problems in your notebooks.

MUST DO 20 MIN.



Teacher: The first problem is: Multiply 421 × 2.

Teacher: Take your time to solve it. Once you have completed it, check your answer.

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

Teacher: Work on these problems individually. I will come around and support you if needed.

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

Teacher: Today, we will practise multiplication by playing a game of Multiplication Bingo. You will make your own bingo cards in your notebooks.

COULD DO 15 MIN.

Teacher: To start, draw a 5 × 5 grid on a page in your notebook. This will be your bingo card. You can use your ruler to make neat lines for the grid.

Teacher: In each square, write a multiplication problem. For example, in one square, write 3 × 4, in another square, write 6 × 2 and so on. You should write a total of 25 multiplication problems, but remember, you can mix up the problems and write different numbers for each card.

Teacher: I will call out the answers to the multiplication problems one by one. If you have that answer on your bingo card, you can mark that square.

Teacher: For example, if I say 18 and you have 3 × 6 on your card, you can mark that square because 3 × 6 = 18.

Teacher: We will continue until someone gets a complete row, either horizontal, vertical or diagonal, on their bingo card. Once you complete a row, raise your hand and let me know that you have a Bingo.

Teacher: I will check your card to make sure your answers are correct. Then, we can congratulate the winner.

Teacher: Make sure to complete your Home Task and practise your multiplication at home.

Teacher: Well done. I will see you all next time.

Differentiated Activities

110 km/hr

Create a multiplication 'math challenge' booklet. Design several real-life scenarios (e.g., buying 4 packs of pencils where each pack contains 8 pencils). Solve them using multiplication and then write the problems for a partner to solve

80 km/hr

Draw a 'multiplication tree' for problems like 12 × 3. Start with 12 at the root, then branch out showing how the multiplication breaks into parts (e.g., 12 × 3 = 12 × 2 + 12 × 1). After drawing, explain it to a partner.

40 km/hr

Use colored markers to draw shapes like squares and rectangles to represent multiplication. For example, for 13 × 4, draw a 13 × 4 rectangle, count the squares and explain how the total is the product of the two numbers.

Home Task

Create a 'Multiplication Wheel' by following the given instructions:

Take broomsticks, paper, pencil/pen, cardboard, glue. Take a cardboard and paste a white paper on it. To perform the multiplication of a number 5 with a number, take 5 broomsticks and paste them on the cardboard. To multiply a number 5 and 1, put one stick horizontally on the 5 vertical sticks on the cardboard. Count the number of points of intersection which is 5. 5 × 1 = 5. Now, place 2 sticks horizontally on the 5 vertical sticks. Count the points of intersection. The number of points of intersection is 10. Thus, 5 × 2 = 10. Similarly, place 3 sticks horizontally on the 5 vertical sticks and count the points of intersection, which is 15. So, 5 × 3 = 15. In this way, find the product of 5 with any number. Be ready to present your multiplication wheel in the class.

Bring magazines cut out pictures showing how people, animals and plants live together. You will create a collage in class using these pictures in 'Creating better' activity.

Period 12

SHOULD DO

5 MIN.

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

Teacher: Before we begin today's lesson, let us quickly review multiplication from the last period.

Teacher: I will write a multiplication problem on the board and you need to solve it as quickly as possible. Ready?

Teacher: Solve 132 × 3.

Teacher: If you think the answer is 126, raise your right hand. If you think the answer is 130, raise your left hand.

Teacher: Yes, the correct answer is 126. Well done.

Teacher: Solve 31 × 4.

Teacher: If you think the answer is 124, raise your right hand. If you think the answer is 130, raise your left hand.

Teacher: Correct. The answer is 124.

Teacher: Great. Now that we have warmed up, let us move ahead with today's lesson.

E **Write in columns. Find the products. Write the answers in your notebook.**

1. 132 × 3	2. 518 × 4	3. 756 × 7	4. 3311 × 2
5. 1312 × 5	6. 3278 × 3	7. 41 × 22	8. 59 × 47
9. 67 × 65	10. 112 × 14	11. 298 × 16	12. 345 × 28

77

MUST DO

10 MIN.

Teacher: Let us now begin with Exercise E. Solve the following problems in your notebooks.

Teacher: The first problem is: Multiply 132 × 3.

Teacher: Take your time to solve it. Once you have completed it, check your answer.

Teacher: Work on these problems individually. I will come around and support you if needed.

Teacher: Now, the next problem: Multiply 518 × 4.

Teacher: Solve it and be discuss your answers with a classmate.

(Guide the students to complete Exercise E).

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

F **Solve the following word problems, in your notebook.**

1. There are 234 students in grade 3. There are 8 classes in the school with the same strength. How many students are there in the school?
2. A factory makes 1650 shirts in a day. How many shirts will it make in 5 days?
3. A school arranged 12 buses for a picnic. If each bus carried 28 students, how many students went for the picnic?
4. In a book fair, 147 people bought novels for ₹99 each. How much money did they spend in all?

77

Teacher: Now, let us move on to Exercise F. Solve only the first two word problems in your notebook.

MUST DO
10 MIN.

Teacher: Who will read and explain the first question ?

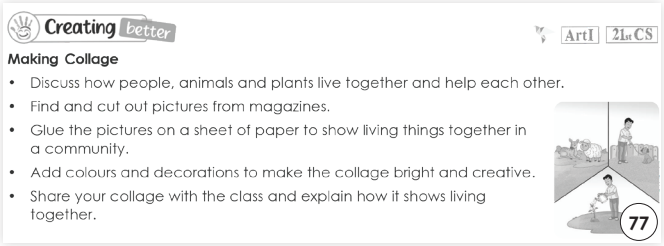
Teacher: Take a moment to solve this problem. Once you have completed it, check your answer.

Teacher: Who will read and explain the next activity.

Teacher: Solve this in the same way. Write down your answers in your notebook.

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

Creating better


Creating better

ArtI 21st CS

Making Collage

- Discuss how people, animals and plants live together and help each other.
- Find and cut out pictures from magazines.
- Glue the pictures on a sheet of paper to show living things together in a community.
- Add colours and decorations to make the collage bright and creative.
- Share your collage with the class and explain how it shows living together.

77

Teacher: Let us now work on a creative activity given in 'Creating better' section.

MUST DO
15 MIN.

Teacher: Everyone please open page 77 in the Main Course Book.

Teacher: We will discuss how people, animals and plants live together and help each other.

(Guide the students to complete the activity.)

Differentiated Activities

110 km/hr

Write a story where you must calculate the total number of items, like books or fruit, in multiple boxes. Use 2-digit numbers, then write a series of related multiplication problems. Share your story with a partner to solve.

80 km/hr

Create a 'multiplication recipe.' Pick an item you would cook (e.g., sandwiches) and list the quantities needed for one serving. Then, calculate how much would be needed if you made 5 servings. Solve it with a partner.

40 km/hr

Draw a simple grid of 15 rows and 3 columns and then fill in the grid with shapes, colors or numbers. Afterward, explain to a partner how the grid represents a multiplication problem, such as 15 × 3.

Home Task

Solve question 3 and 4 of Exercise F given on page 77 in the Main Course Book. Write the answers neatly in the notebook.

Bring your 'Little Book' in the next class for 'Revising better' activity.

Period 13

SHOULD DO
5 MIN.

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

Teacher: Today, we will begin with a quick warm-up. I will give you a multiplication word problem and you need to think of the solution. Are you ready?

Teacher: Here's your first word problem:

If you have 4 boxes of bottles and each box contains 16 bottles, how many bottles do you have in total?

Teacher: Take a moment to think about it. Write your answer in your notebook.

Teacher: Raise your hand if you know the answer.

Teacher: Yes, the answer is 24 chocolates. You get this by multiplying 4 × 6 = 24.

Teacher: Now, here is another one:

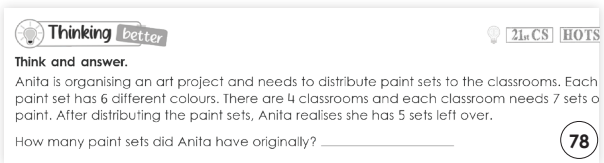
If you have 5 rows of apples and there are 8 apples in each row, how many apples do you have in total?

Teacher: Take a minute to solve this.

Teacher: The answer is 5 × 8 = 40 apples. Great work.

Teacher: Well done, everyone. Let us now continue with today's lesson.

Thinking better


Thinking better

21st CS HOTS

Think and answer.

Anita is organising an art project and needs to distribute paint sets to the classrooms. Each paint set has 6 different colours. There are 4 classrooms and each classroom needs 7 sets o paint. After distributing the paint sets, Anita realises she has 5 sets left over.

How many paint sets did Anita have originally? _____

78

Teacher: Open your books to the 'Thinking better' section. Let us solve these questions together.

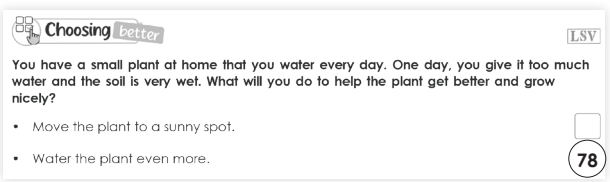
MUST DO
5 MIN.

Teacher: Excellent. How do we solve this problem?

Teacher: Work with your partner to solve question.

Teacher: So, Anita originally had 33 paint sets. Well done, everyone.

Choosing better


Choosing better

LSV

You have a small plant at home that you water every day. One day, you give it too much water and the soil is very wet. What will you do to help the plant get better and grow nicely?

- Move the plant to a sunny spot.
- Water the plant even more.

78

Teacher: Now, let us discuss 'Choosing better' section.

MUST DO
5 MIN.

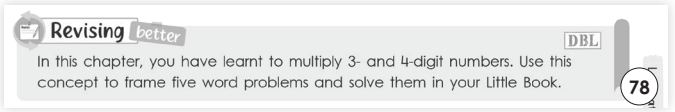
Teacher: Here is your next problem. Please read it and explain it to your partner. After that, think about what actions you will take.

Teacher: Great explanation. What actions would help the plant?

Teacher: Yes, you should move the plant to a sunny spot and water it less. These are great solutions. Well done.

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

Revising better



Teacher: Open your 'Little Book' for 'Revising better' section. Let us solve the following word problems together.

MUST DO
5 MIN.

Teacher: You are organizing a charity event, and you need to calculate how much money you will collect. If 200 people attend and each person donates ₹50, how much money will be collected in total?

Teacher: Read the problem, explain it and then solve it.

Teacher: Great. What steps do we follow to solve this?

Teacher: Yes, we multiply 200 × 50 to get the total amount. So, the total money collected will be ₹10,000.

Teacher: Now, let us try another one.

Teacher: If a factory produces 250 toys every day and operates 6 days a week, how many toys will the factory produce in one week?

Teacher: Read the problem, explain it and solve it in your 'Little Book'.

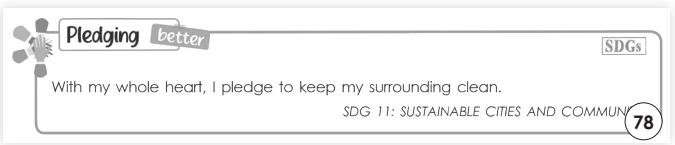
Teacher: Excellent. What steps will you take?

Teacher: Yes, we multiply 250 × 6 to get the total number of toys produced in one week. The answer is 1500 toys. Well done.

Teacher: Now, frame a similar problem in your Little Book and solve it. Be ready to share your solution and the steps you used to solve it.

(Give more questions in the similar way to revise the chapter.)

Pledging better



Teacher: Let us move to 'Pledging better' section.

MUST DO
5 MIN.

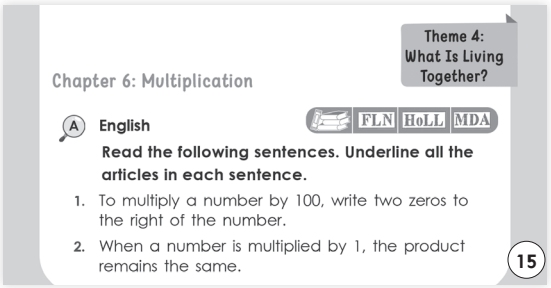
Teacher: Read this pledge aloud with me: With my whole heart, I pledge to keep my surroundings clean.

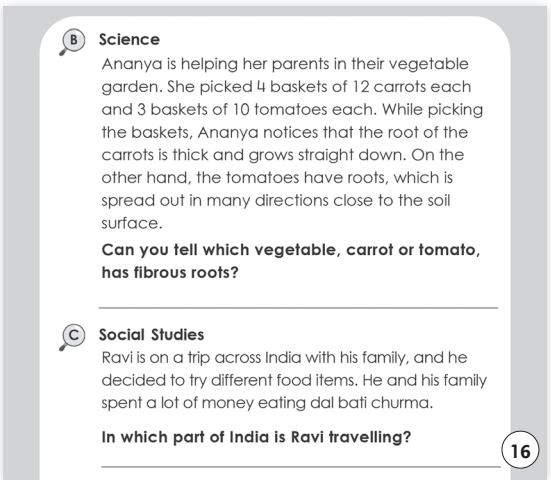
Teacher: This pledge is part of SDG 11: Sustainable Cities and Communities, encouraging us to care for our environment.

Teacher: Let us all say the pledge together. Yes, we all pledge to keep our surroundings clean.

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

Book of Holistic Teaching





(Refer to the Book of Holistic Teaching, page 15 and 16 under the title 'Multiplication.' 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
15 MIN.

Teacher: Well done today, everyone. You all participated actively and solved the problems successfully.

Teacher: I will see you all in the next class. Great work.

Differentiated Activities

110 km/hr

Create a multiplication quiz game for your partner, with 5 challenging questions. Each question should involve expanding the greater number and solving using multiple steps. Present the quiz and have your partner solve.

80 km/hr

Write a math riddle involving multiplication. For example, I am a number that, when multiplied by 3, equals 30. What number am I?' Have your partner solved the riddle by writing down the multiplication problem.

40 km/hr

Create a 'counting objects challenge.' Draw or paste pictures of items, like 4 cars and 13 cars and ask your partner to solve how many cars there are in total (4 × 13). Explain your method to them.

Home Task

Revise the concepts discussed in the class. Be ready to present your project, multiplication wheel in the next class.

Period 14

SHOULD DO 5 MIN.

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

Teacher: Today, we will begin with a fun and creative multiplication activity called the Multiplication Story Challenge.

Teacher: I am going to tell you a short story and you need to identify the multiplication problem hidden in the story. Let us begin:

Teacher: Here is the story:

'There are 4 boxes and each box contains 6 apples. How many apples do we have in total?'

Teacher: What multiplication problem does this story represent?

Teacher: Yes. The problem is 4 × 6 = 24 apples.

Teacher: Now, I will tell you another story. Listen carefully and then solve the multiplication problem.

Teacher: Here is the next story:

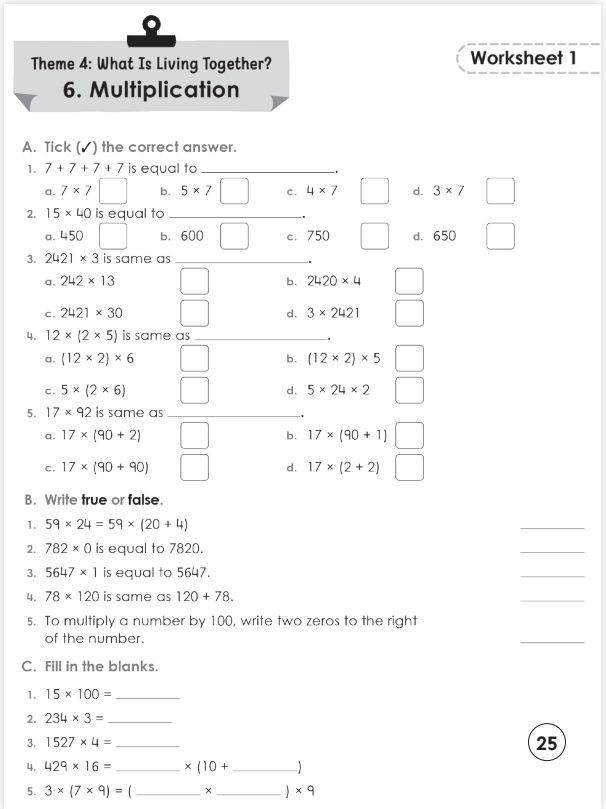
'There are 5 classrooms in a school and each classroom has 8 chairs. How many chairs are there in total?'

Teacher: What multiplication problem do we have here?

Teacher: Yes. The answer is 5 × 8 = 40 chairs.

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

Worksheet 1



Theme 4: What Is Living Together?

6. Multiplication

Worksheet 1

A. Tick (✓) the correct answer.

1. 7 + 7 + 7 + 7 is equal to _____.
   a. 7 × 7 ☐ b. 5 × 7 ☐ c. 4 × 7 ☐ d. 3 × 7 ☐
2. 15 × 40 is equal to _____.
   a. 450 ☐ b. 600 ☐ c. 750 ☐ d. 650 ☐
3. 2421 × 3 is same as _____.
   a. 242 × 13 ☐ b. 2420 × 4 ☐
   c. 2421 × 30 ☐ d. 3 × 2421 ☐
4. 12 × (2 × 5) is same as _____.
   a. (12 × 2) × 6 ☐ b. (12 × 2) × 5 ☐
   c. 5 × (2 × 6) ☐ d. 5 × 24 × 2 ☐
5. 17 × 92 is same as _____.
   a. 17 × (90 + 2) ☐ b. 17 × (90 + 1) ☐
   c. 17 × (90 + 90) ☐ d. 17 × (2 + 2) ☐

B. Write **true** or **false**.

1. 59 × 24 = 59 × (20 + 4) _____
2. 782 × 0 is equal to 7820. _____
3. 5647 × 1 is equal to 5647. _____
4. 78 × 120 is same as 120 + 78. _____
5. To multiply a number by 100, write two zeros to the right of the number. _____

C. Fill in the blanks.

1. 15 × 100 = _____
2. 234 × 3 = _____
3. 1527 × 4 = _____
4. 429 × 16 = _____ × (10 + _____)
5. 3 × (7 × 9) = (_____ × _____) × 9

25

MUST DO 20 MIN.

Teacher: Please open your workbooks to Worksheet 1 given on page 25. Let us go through the questions together.

Teacher: There are 3 Exercise in this worksheet. Who will read and explain Exercise A?

Teacher: In this Exercise, we will mark the correct answer. Are you ready?

Teacher: Question 1 is 7 + 7 + 7 + 7 = _____

Teacher: Can anyone tell me how we can solve this?

Teacher: Yes, instead of adding the same number multiple times, we can multiply it. So, this is 4**× 7**.

Teacher: What do you get when you multiply 4 by 7?

Teacher: Correct. The answer is 28. So, the correct answer is 4 × 7 = 28.

Teacher: Now, go ahead and solve the other questions in Exercise A on your own. We will discuss the answers together.

Teacher: Now, let us move to Exercise B where you will write 'true' or 'false' based on the given statements.

Teacher: Here is Question 1: 59 × 24 = 59 × (20 + 4)

Teacher: Do you think this statement is true or false?

Teacher: Yes, this is true. When we multiply 59 by 24, it is the same as multiplying 59 by 20 and then multiplying 59 by 4 and then adding the two results.

Teacher: So, 59 × 24 = 59 × (20 + 4) is correct.

Teacher: Now, try the other questions in Exercise B. Remember to think carefully about each one before you decide if the statement is true or false.

Teacher: Now, let us look at Exercise C. Who will read and explain the exercise?

Teacher: Yes, fill in the blanks with the correct answers.

Teacher: Let us go through Question 1 together: 15 × 100 =

Teacher: What do we get when we multiply 15 by 100?

Teacher: Yes, when we multiply a number by 100, we simply add two zeros to the number. So, 15 × 100 = 1500.

Teacher: The answer is 1500.

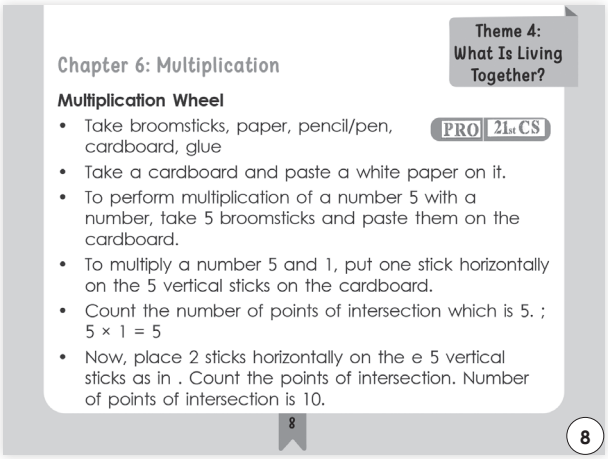
Teacher: Now, complete the rest of the questions in Exercise C. Remember, whenever you multiply by 100 or 10, just think about how many zeros to add to the number.

Teacher: Once you have finished solving the exercise, we will check the answers together.

Teacher: If you have any doubts or questions while solving, raise your hand and I will come to help you. Feel free to ask if anything is unclear or if you need further explanation on how to solve the multiplication problems.

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

Book of Project Ideas



Theme 4: What Is Living Together?

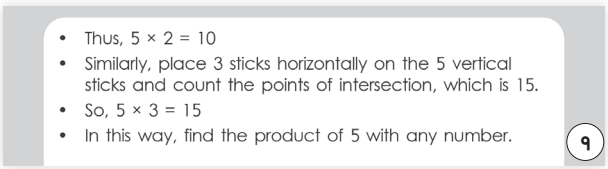
Chapter 6: Multiplication

Multiplication Wheel

- Take broomsticks, paper, pencil/pen, cardboard, glue
- Take a cardboard and paste a white paper on it.
- To perform multiplication of a number 5 with a number, take 5 broomsticks and paste them on the cardboard.
- To multiply a number 5 and 1, put one stick horizontally on the 5 vertical sticks on the cardboard.
- Count the number of points of intersection which is 5. ; 5 × 1 = 5
- Now, place 2 sticks horizontally on the e 5 vertical sticks as in . Count the points of intersection. Number of points of intersection is 10.

8

8



- Thus, 5 × 2 = 10
- Similarly, place 3 sticks horizontally on the 5 vertical sticks and count the points of intersection, which is 15.
- So, 5 × 3 = 15
- In this way, find the product of 5 with any number.

9

(For project Ideas, please refer to the book of Project Ideas, page 8, 9 under the title 'Multiplication.' Scaffold students to present the 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 multiplication through this engaging project.)

COULD DO

15 MIN.

Teacher: Excellent work today, everyone. See you in the next class.

Differentiated Activities

110 km/hr

Develop a 'math treasure hunt.' Place multiplication problems around the room (e.g., 12 × 3, 14 × 5) for your partner to find and solve. Each problem solved leads to the next one until the treasure is found.

80 km/hr

Create a multiplication puzzle where each piece of a jigsaw represents part of a multiplication problem (e.g., one piece could be 6, the next 7). Have your partner assemble the puzzle to find the product.

40 km/hr

Use a drawing of a tree with multiple branches and place multiplication problems along each branch. For example, for 2 × 3, each branch should show 2 groups of 3 items. Have your partner count the total and explain the multiplication process.

Home Task

Create a multiplication word problem. Exchange it with a classmate in the next class to solve each other's problems.

Period 15

SHOULD DO

5 MIN.

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

Teacher: Today, we will be playing the 'Multiplication Detective Game'. Each of you will become a 'multiplication detective' to solve problems using clues I will give you. I will describe a scenario, and you need to figure out what multiplication problem it represents. You will then work with a partner to solve it.

Teacher: Let us begin. Here is your first clue:

"There are 5 shelves in a library. Each shelf holds 8 books. How many books are there in total?"

Teacher: What multiplication problem does this scenario represent?

Teacher: Yes, it is 5 × 8. Now, solve it and tell your partner the answer.

Teacher: Here is another clue:

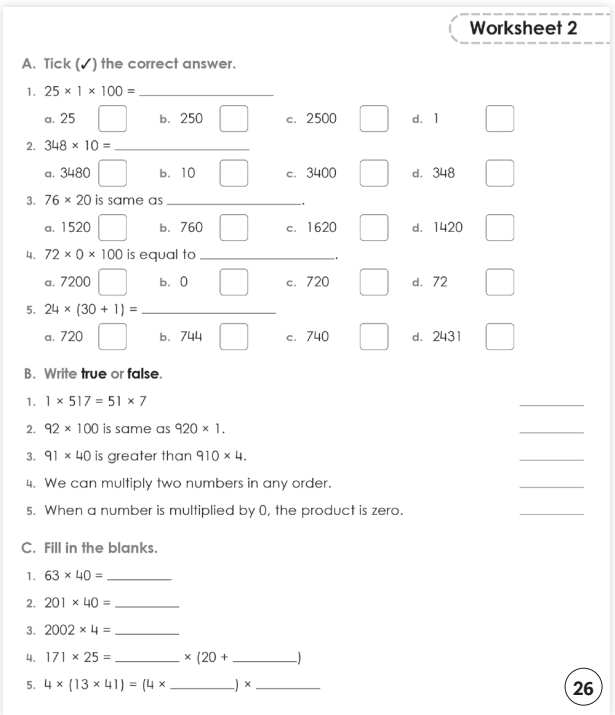
"A bus can carry 12 passengers. If there are 6 buses, how many passengers are there in total?"

Teacher: What multiplication problem does this represent?

Teacher: Correct, it is 6 × 12. Solve it with your partner.

Teacher: Fantastic work, detectives. Let us continue the lesson with more fun activities.

Worksheet 2



Worksheet 2

A. Tick (✓) the correct answer.

1. 25 × 1 × 100 = _____
   a. 25 ☐ b. 250 ☐ c. 2500 ☐ d. 1 ☐
2. 348 × 10 = _____
   a. 3480 ☐ b. 10 ☐ c. 3400 ☐ d. 348 ☐
3. 76 × 20 is same as _____.
   a. 1520 ☐ b. 760 ☐ c. 1620 ☐ d. 1420 ☐
4. 72 × 0 × 100 is equal to _____.
   a. 7200 ☐ b. 0 ☐ c. 720 ☐ d. 72 ☐
5. 24 × (30 + 1) = _____
   a. 720 ☐ b. 744 ☐ c. 740 ☐ d. 2431 ☐

B. Write **true** or **false**.

1. 1 × 517 = 51 × 7 _____
2. 92 × 100 is same as 920 × 1. _____
3. 91 × 40 is greater than 910 × 4. _____
4. We can multiply two numbers in any order. _____
5. When a number is multiplied by 0, the product is zero. _____

C. Fill in the blanks.

1. 63 × 40 = _____
2. 201 × 40 = _____
3. 2002 × 4 = _____
4. 171 × 25 = _____ × (20 + _____)
5. 4 × (13 × 41) = (4 × _____) × _____

26

Teacher: Please open your workbooks to Worksheet 2, given on page 26. Let us go through the questions together.

MUST DO

15 MIN.

Teacher: There are three exercises in this worksheet. Who would like to read and explain Exercise A?

Teacher: In this exercise, mark the correct answer by ticking the box. Let us go through Question 1 together.

Teacher: Question 1 is: 25 × 1 × 100 =

Teacher: How can we solve this?

Teacher: Yes, we know multiplying by 1 does not change the value, so it is the same as 25 × 100.

Teacher: What is 25 × 100?

Teacher: Correct. The answer is 2500. So, the correct answer is c. 2500.

(Scaffold the students to complete the further questions in the similar way.)

Teacher: Now, let us look at Exercise B. Here, you need to write true or false based on the given statements.

Teacher: Let us go through Question 1: 1 × 517 = 51 × 7.

Teacher: Do you think this statement is true or false?

Teacher: Yes, this is false. If we look carefully, 1 × 517 is not the same as 51 × 7.

Teacher: Now, go ahead and solve the rest of the questions in Exercise B. Think carefully about each statement before writing your answer.

Teacher: Now, let us move on to Exercise C, where you will fill in the blanks with the correct answers.

Teacher: Let us go through Question 1: 63 × 40 =

Teacher: What do we get when we multiply 63 by 40?

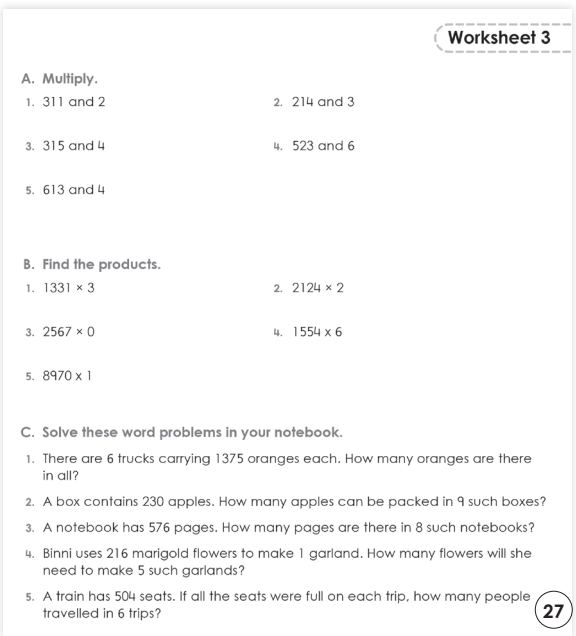
Teacher: Yes, 63 × 40 = 2520. Now, go ahead and complete the rest of the questions in Exercise C.

Teacher: Once you have completed all the exercises in Worksheet 2, we will go through the answers together.

Teacher: If you have any doubts or questions while solving, raise your hand and I will come around to help you.

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

Worksheet 3



Worksheet 3

A. Multiply.

1. 311 and 2
2. 214 and 3
3. 315 and 4
4. 523 and 6
5. 613 and 4

B. Find the products.

1. 1331 × 3
2. 2124 × 2
3. 2567 × 0
4. 1554 x 6
5. 8970 x 1

C. Solve these word problems in your notebook.

1. There are 6 trucks carrying 1375 oranges each. How many oranges are there in all?
2. A box contains 230 apples. How many apples can be packed in 9 such boxes?
3. A notebook has 576 pages. How many pages are there in 8 such notebooks?
4. Binni uses 216 marigold flowers to make 1 garland. How many flowers will she need to make 5 such garlands?
5. A train has 504 seats. If all the seats were full on each trip, how many people travelled in 6 trips?

27

(You may take this worksheet for assessment or revision purpose.)

MUST DO

15 MIN.

You may generate additional practise worksheets using the **Test Generator** given on digital platform.

SHOULD DO

5 MIN.

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

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

Teacher: Think about the topics, have we **l**earnt 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

Organize a 'multiplication tournament' where you compete against a partner by solving increasingly challenging multiplication word problems. The winner is the one who solves the most problems correctly in a set time.

80 km/hr

Make a multiplication bingo card with answers to multiplication problems. For example, 5 × 4 = 20, 6 × 3 = 18 and so on. Have a partner call out the problems and mark the answers on the card.

40 km/hr

Create a multiplication 'show and tell' with everyday objects. For example, show 3 bags with 40 apples each, then multiply 3 × 40.

Home Task

Practise the questions discussed in this chapter.

Learning Outcomes

The **students will:**

Domain	Development Area
Physical Development	• develop fine motor skills through activities like drawing arrays and writing multiplication facts. • enhance coordination through kinaesthetic activities such as skip counting jumps and multiplication relays.
Socio-Emotional and Ethical Development	• encourage teamwork through peer discussions, partner activities and interactive multiplication challenges. • develop patience and perseverance by solving multiplication puzzles and real-life problems. • build confidence by engaging in group activities like multiplication races and classroom quizzes.
Cognitive Development	• understand multiplication as repeated addition through hands-on activities and visual aids. • apply multiplication properties while solving exercises. • improve problem-solving and reasoning skills through word problems and real-world applications.
Language and Literacy Development	• enhance mathematical vocabulary by using terms like product and factors in discussions. • develop comprehension skills by interpreting multiplication - based on stories and problem scenarios. • articulate multiplication strategies through partner discussions and class presentations.
Aesthetic and Cultural Development	• explore patterns in multiplication using visual representations such as number grids and multiplication charts.
Positive Learning Habits	• develop curiosity and confidence in mathematical thinking, demonstrating persistence in problem-solving tasks.

Starry Knights

What challenges did you overcome? List them here.

Give yourself a STAR for being a fabulous teacher!!