THE RE&L WORK MATH WORKBOOK

It's never too late to love math!

Written By Madhava Miglani

INDEX

- About the Project
- Message from the Author

- Chapter 1: Patterns, Variables, and Everyday Algebra

- Chapter 2: Shapes and Angles Around Us

- Chapter 3: Measuring Spaces

- Chapter 4: Money Maths

- Chapter 5: Reading and Understanding Data

- Chapter 6: Everyday Maths Challenge

- Answer Key
- Sources

ABOUT THE PROJECT

RE&L is a social initiative founded in June 2026 with the goal of increasing access to practical educational resources in mathematics and economics for public schools and teaching charities across India. At its heart, it aims to strengthen student confidence and make learning feel relevant to everyday life for them, rather than something confined to the class.

This Mathematics Workbook builds on that mission by introducing core math concepts through familiar, real-world situations. Rather than focusing only on formulas and memorisation, it encourages students to understand why mathematics matters by connecting topics like algebra, geometry, measurement, and more to everyday economic and social decisions.

Across the six chapters, students will find step-by-step explanations, worked examples, practice exercises and fun challenges that can help them develop their problem-solving skills. Together with RE&L's additional resources, this workbook aims to make math something that is more approachable, meaningful and exciting for every learner!

MESSAGE FROM THE AUTHOR

Dear Reader,

Thank you for picking up this workbook.

Growing up, I often noticed that mathematics was taught as a subject where getting the right answer seemed more important than understanding the thinking behind it. As a result, many students like us, begin to believe that they simply "aren't good at maths," when in reality they may never have had the chance to learn it in a way that feels practical and relatable.

That was my motivation for creating this workbook.

Instead of presenting mathematics as a collection of disconnected formulas, I wanted to show how it helps us make everyday decisions. Whether that is comparing prices while shopping, interpreting graphs, measuring a room or recognising the many patterns around us. My hope is that each chapter helps you become a little more curious and a little less afraid of making mistakes.

Most importantly, I hope this reminds you that math isn't about being the fastest person in the room. It's about learning how to think, ask questions, reason and solve problems. Skills that will stay with you long after you've finished these pages.

Happy learning!

Madhava Miglani,
Author, The RE&L Work Math Workbook

CHAPTER 1: PATTERNS, VARIABLES, AND EVERYDAY ALGEBRA

Have you ever noticed that some things around you follow a pattern?

A stack of bricks might grow by the same number each time another layer is added. Seats in a classroom or bus may be arranged in rows. A fruit seller might make piles of oranges with the same number of oranges in each pile.

These are all patterns. A pattern is something that repeats or changes according to a rule.

Patterns help us predict what comes next. Instead of starting from the beginning every time, we can use the rule to find an answer quickly.

For example, imagine a stack of bricks that starts with 3 bricks in the first row. Each row below has 2 more bricks than the row above it.

- Row 1: 3 bricks
- Row 2: 5 bricks
- Row 3: 7 bricks
- Row 4: 9 bricks

The pattern is +2 each time.

So, without building the whole stack, we can work out that the 10th row has 21 bricks.

That is the power of patterns: once we know the rule, we can use it to find numbers we have not counted yet.

Try It Yourself

Look at this pattern:

4, 7, 10, 13, ___, ___

1. What number is being added each time?
2. What are the next two numbers?

When We Don't Know the Number

Sometimes we know the rule, but we don't know one of the numbers. This is where **variables** can help. A variable is a letter that stands for a number we don't know yet. We often use letters such as **x, y, or n** for these.

For example, instead of saying:

"The number of pencils Priya bought" we can simply write: x

Now we can use that letter in a maths problem.

If Priya has x pencils and buys 5 more, we can write: $x + 5$

This is called an **algebraic expression**.

Finding the Mystery Number

An equation tells us that two things are equal.

For example: $x + 5 = 12$. This tells us that some number, when 5 is added to it, gives 12. Our job is to find that mystery number.

To solve an equation, we need to keep both sides equal. Whatever we do to one side, we must also do to the other.

Example 1: Solve x + 5 = 12

Step 1: Take 5 away from both sides.

x + 5 − 5 = 12 − 5

Step 2: Simplify.

x = 7

So, the mystery number is **7**.

We can check:

7 + 5 = 12 ✓

Try It Yourself

Solve:

1. **x + 9 = 15**
2. **x + 4 = 11**
3. **x + 7 = 20**

What If the Number Is Being Multiplied?

We can use the same idea when a variable is multiplied by a number.

Look at:

3x = 18

This means **3 × x = 18**.

To find x, we divide both sides by 3.

Example 2: Solve 3x = 18

Step 1: Divide both sides by 3.

3x ÷ 3 = 18 ÷ 3

Step 2: Simplify.

x = 6

So, the mystery number is **6**.

We can check:

3 × 6 = 18 ✓

Try It Yourself

Solve:

1. **6x = 42**
2. **4x = 20**
3. **5x = 35**

Mystery Number Challenge

Now it is your turn to use variables and equations to solve some everyday problems.

1. The Toy Shop

A shopkeeper sells a toy for **₹45**. This is **₹15 more** than what it cost him to make.

Let the cost of making the toy be **x**.

1. Write an equation to represent the problem.
2. Solve the equation.
3. How much did it cost the shopkeeper to make the toy?

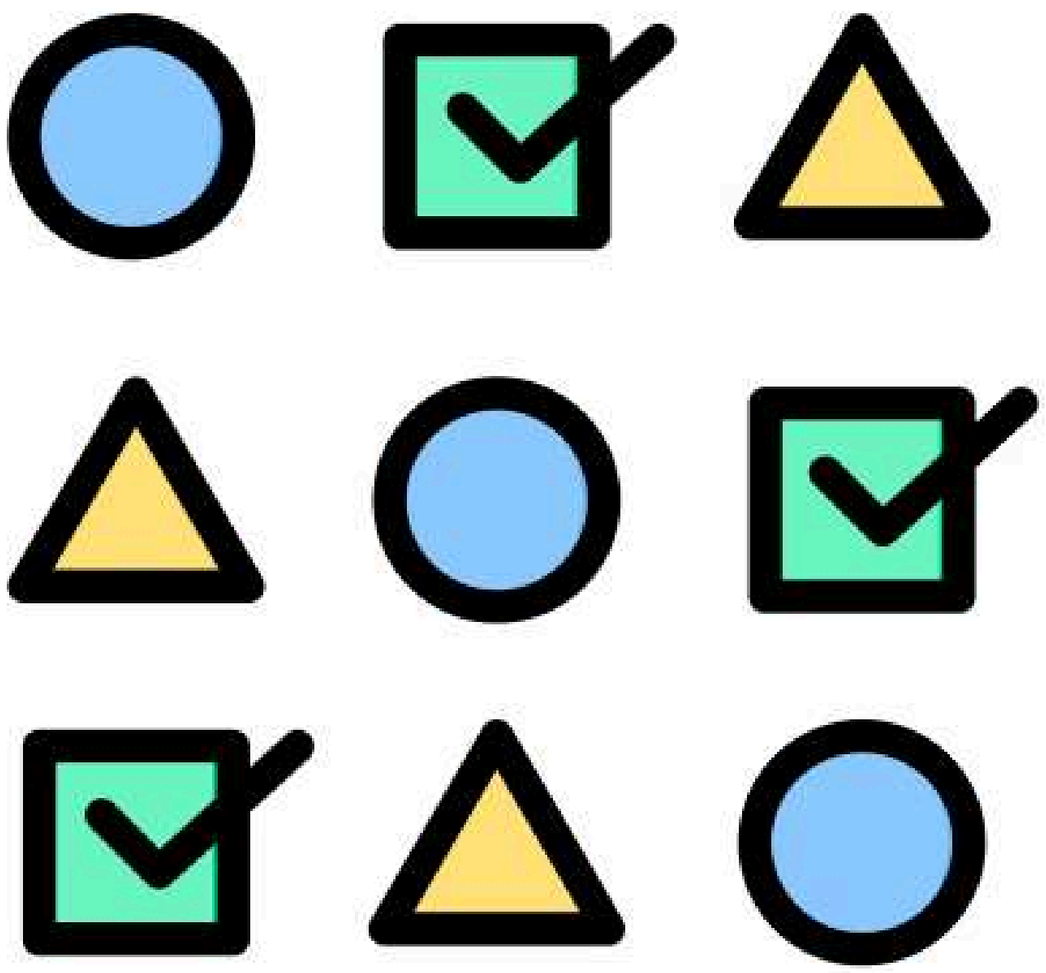
2. The Storybooks

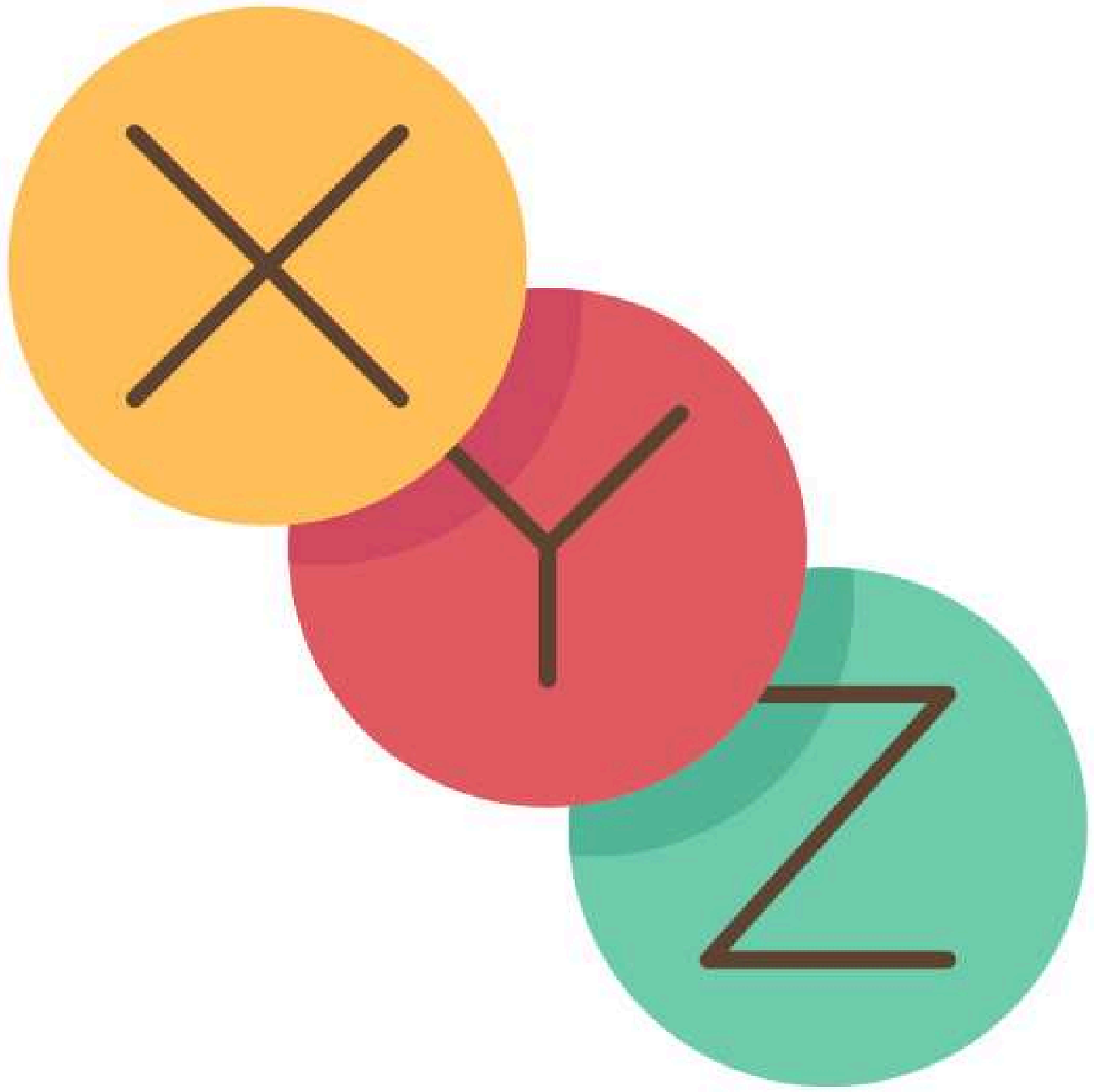
Priya buys some storybooks. Each book costs **₹60**. She spends **₹300** altogether.

Let the number of books she bought be **x**.

1. Write an equation to represent the problem.
2. Solve the equation.
3. How many storybooks did Priya buy?

Remember, when you see a problem with a number you don't know, don't panic! Choose a variable → write an equation → solve it → check your answer. Once you know the rule, even a mystery number doesn't have to stay a mystery.





CHAPTER 2: SHAPES AND ANGLES AROUND US

Let us think of our immediate surroundings: you can see that they are made of different shapes and come in different sizes. For example, windows, doors, traffic cones, tile floors all come in specific shapes and sizes.



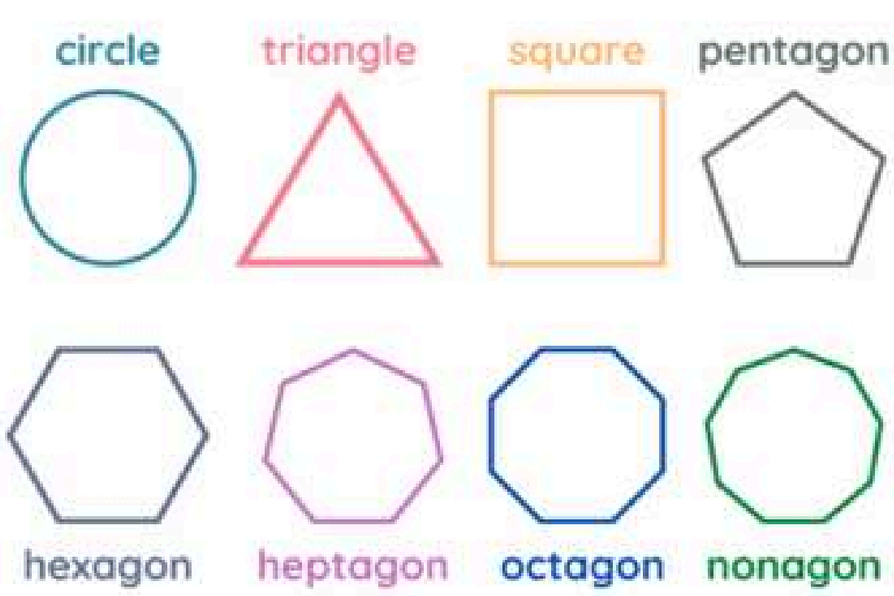


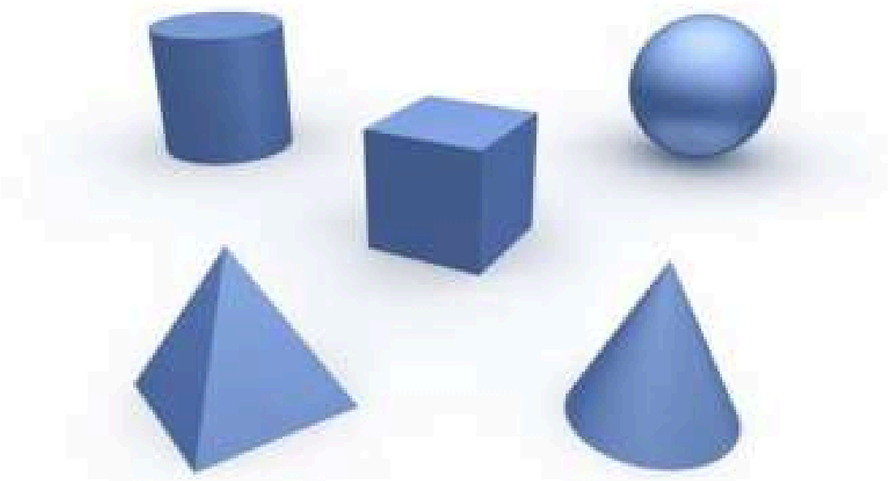


What are these shapes? Most windows come in square shapes (although there are other ones which are round, angular and in different and unique shapes as well), doors are usually rectangular, traffic cones are triangular, tile floors are often square, tables are either circular or rectangular and there are several objects around us that we see on an every day basis, that has a unique and standard shape to it that we are reminded of, when we think of the object in question.

The shapes, sizes, angles and dimensions of the objects mentioned above are a set of factors that introduce us to the subject of geometry.

Geometry is the mathematical study of shapes, sizes and dimensions, often observed in our everyday lives. Geometrical studies, focuses on two parts of shapes and sizes: 2 dimensional (2D) and three dimensional (3D).



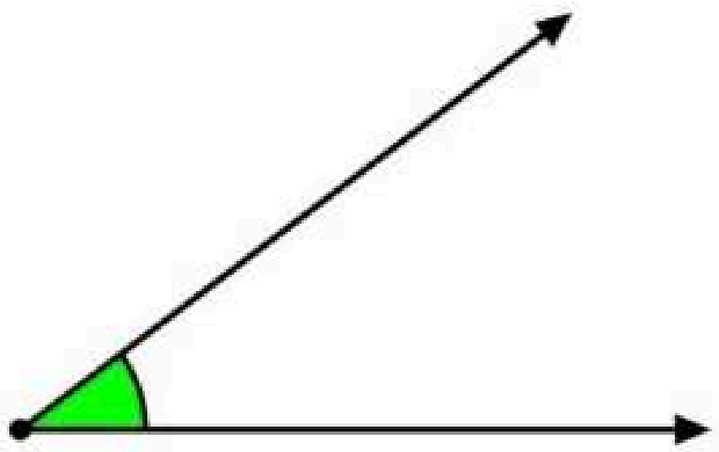


Application of Geometry

Geometry as a subject, allows us to understand shapes, sizes and its angles in a detailed manner. This is very important to our lives, as the understanding of angles, dimensions, sizes and shapes allows us to see the world around us in a clearer manner, while also enabling us to construct, and build things around us more efficiently and accurately. For example, if you were to construct a main door for your house, you would need to know the space available in the wall for the door to be built, and you would have to know the exact dimensions, shape, size, height, width, and angles of the corners in order to make sure the door fits properly into the wall. Geometry assists you in understanding this, and figuring out the answer.

Angles

Take a window: it has four corners, and there are four sides to it as well. When you look at the corners, what do you see? Do you notice that the sides (lines) come together and form a curve or a deviation that makes the shape a square? Yes! This is what we call an **angle.** By definition, angles are produced at the intersection of line segments while forming a shape.



Angles also come in all shapes and sizes, and let us learn further.

Types of Angles

There are three major types of angles within geometry: Acute, Obtuse and Right angle. All angles are denoted by the degree of curve observed in them.

Acute Angle

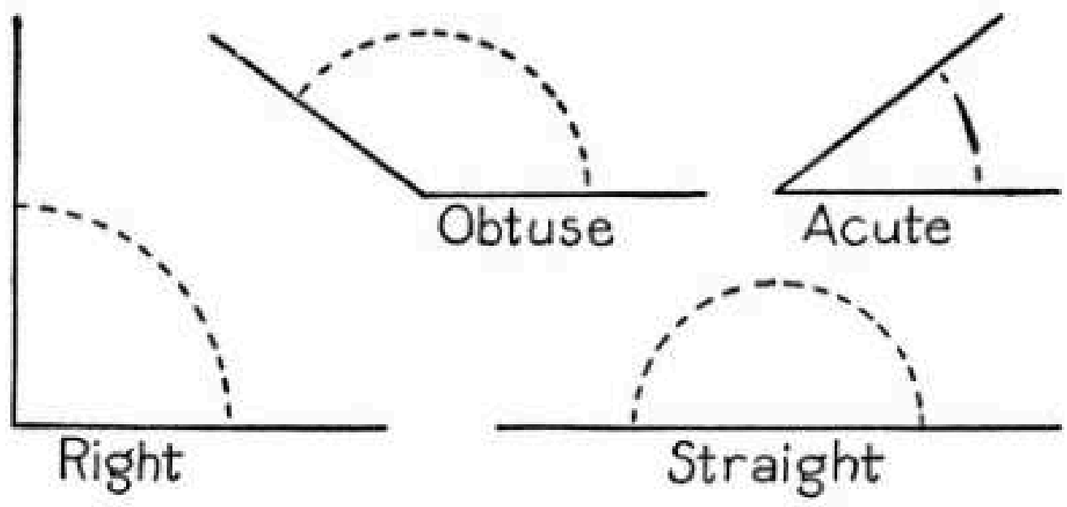
Angles that are within the degrees of 0 and 90 are considered acute. Acute angles always measure below 90 degrees.

Obtuse Angle

Angles between 90 and 180 degrees are known as obtuse angles. An obtuse angle is always contained within 180 degrees, and is never below 90 degrees.

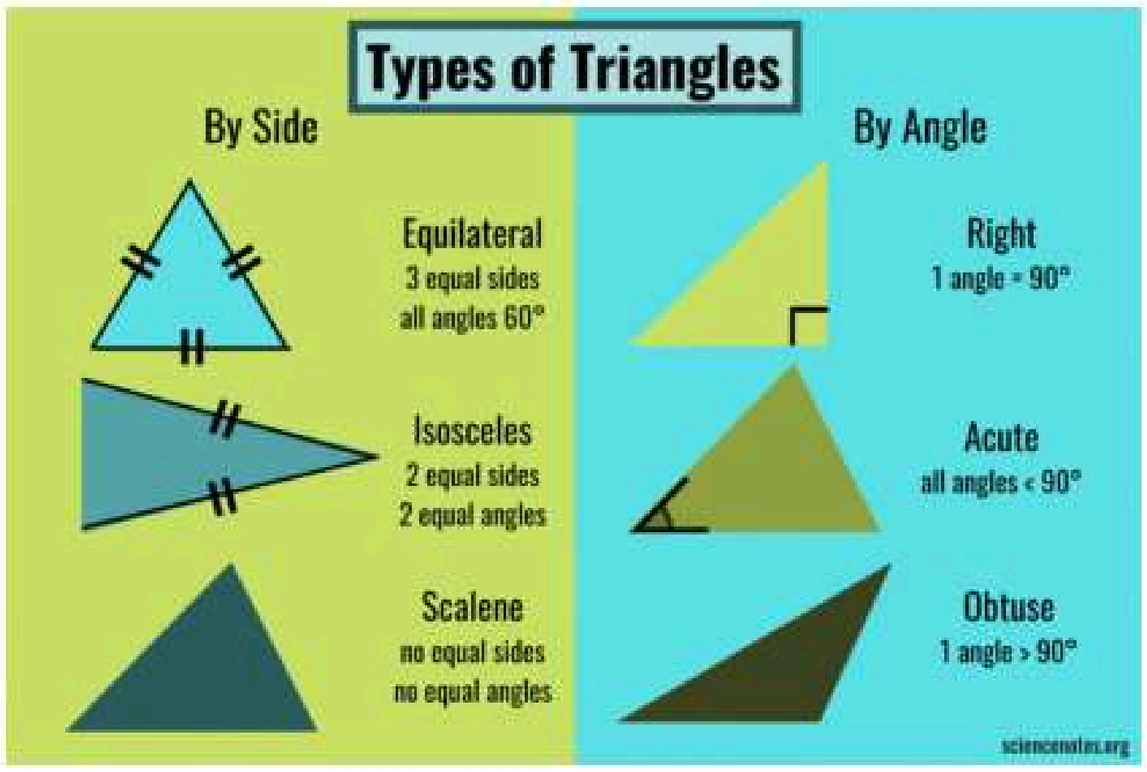
Right Angle

Angles that make for exactly 90 degrees at the intersection of line segments and rays, are known as right angles. They are always 90 degrees and not a single degree below or above that.



Types of Triangles

There are a total of three types of triangles based on their sides and their angles.



Sides:

Equilateral - where all the sides of a triangle are equal in size, with the total sum of all angles is 180 degrees with each angle being 60 degrees.

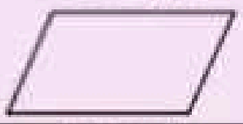
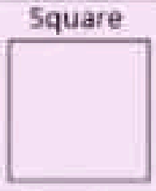
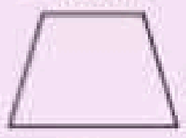
Isosceles - where only two sides, and two angles of a triangle are equal.

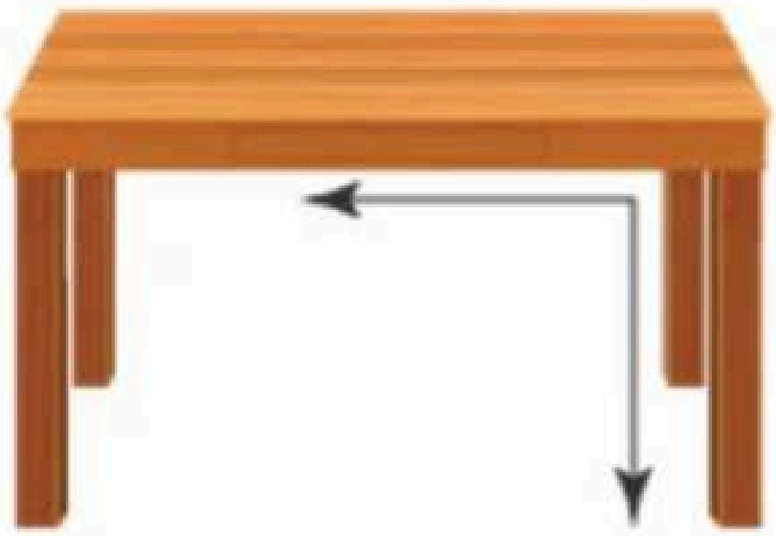
Scalene - where no angles or sides of a triangle are equal at all.

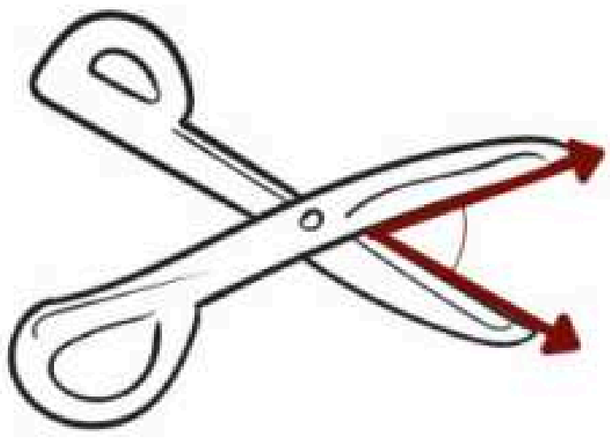
Types of Quadrilaterals

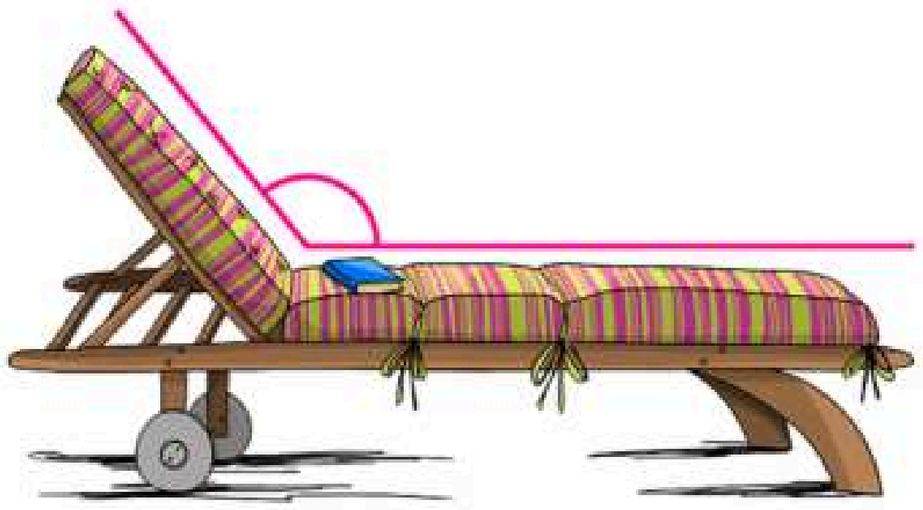
Quadrilaterals are shapes that are closed, and contain 4 sides, 4 angles and 4 corners. There are different types of quadrilaterals, with different properties in each.

Listed below is a table explaining the types of quadrilaterals and their properties:

Type	Properties
Parallelogram 	• Opposite sides are equal and parallel • Opposite angles are equal
Rectangle 	• Opposite sides are equal and parallel • All angles are right angles (90°)
Square 	• Opposite sides are parallel • All sides are equal • All angles are right angles (90°)
Rhombus 	• Opposite sides are parallel • All sides are equal • Opposite angles are equal • Diagonals bisect each other at right angles (90°)
Trapezoid 	• One pair of opposite sides is parallel
Kite 	• Two pairs of adjacent sides are equal • One pair of opposite sides are equal • One diagonal bisects the other • Diagonals intersect at right angle (90°)







Activity: Geometry Hunt

As we all see many shapes and sizes in all the objects around us: at home, at school, in the neighbourhood, at the park, on the streets and anywhere we go. These shapes also contain angles that we see.

In this activity, you are tasked to write down the different shapes and angles that you see within your environment on a daily basis, for the next week. We've mentioned two examples! Please fill the rest of the table below with relevant information and observe your entries carefully. This will show you that the world around you is surrounded by shapes and angles, and geometry is such an important part of our everyday lives and existence!

S No.	Object	Shape	Angle (Obtuse, Acute or Right)
Example	Door	Rectangle	Right Angle
1	Window	Square	Right Angle
2			
3			
4			
5			
6			

CHAPTER 3: MEASURING SPACES

Imagine this: your parents are constructing a house on a plot of land. The plot of land is supposed to be divided, so that:

- a part of it is used to construct the actual house to live inside
- a part of it is used to construct a garage to park your cars and bikes
- and a part of it is used to build a kitchen garden that your parents are really keen on.

Additionally, the plot of land also is supposed to have a border wall built around it for safety reasons.
How does one decide how long the wall on the edge of the land is supposed to be? How does one divide the plot of the land properly, so that the house can be built on it, without compromising on the garage, garden and other necessary constructions?

One simple term: Measurement.

What is Measurement?
Measurement is the process of calculating and finding the size, length, weight, depth, width and other spatial aspects of an object, item or space by comparing it with, and assigning a unit (also known as a standardised form of measurement). Some of these standard formats are “metre”, “centrimetre”, “millimetre”, “kilometre”, “feet”, “square kilometre" among many others.

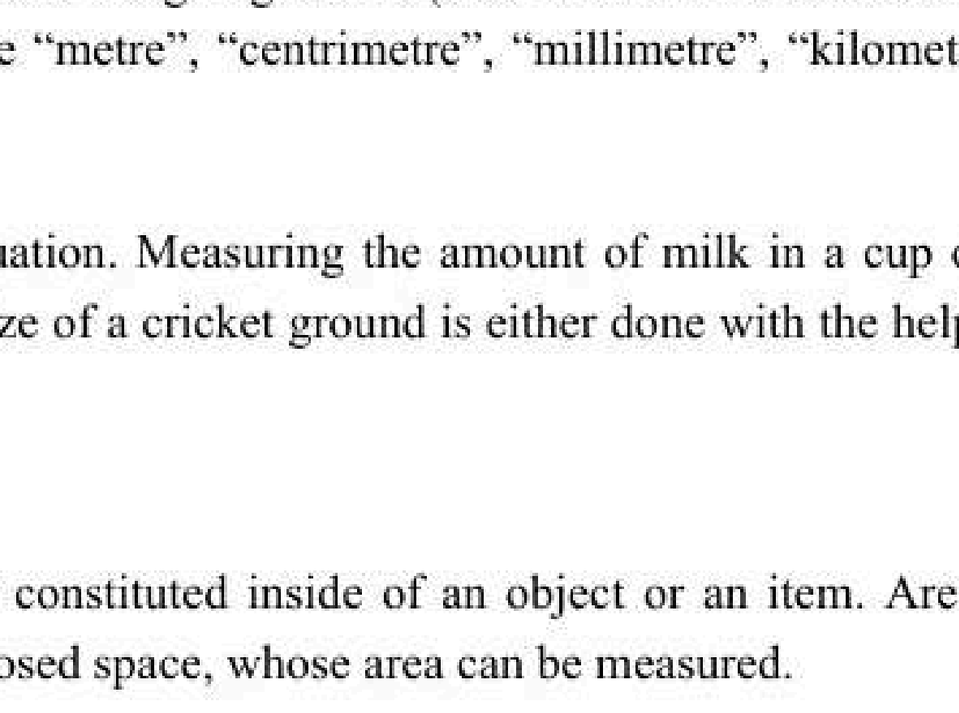
These units are used based on the requirements of the situation. Measuring the amount of milk in a cup or a glass is usually done with mililitres, while measuring the size of a cricket ground is either done with the help of metre, acre, hectare or other measurements.

Formula for Calculations
Area - Area is defined as the total space taken up by, or constituted inside of an object or an item. Area is calculated for objects, spaces and items that constitute an closed space, whose area can be measured.

Area of a square - As a square contains four sides in total, the area of a square is calculated as follows: **Area = Side x Side or a^2.**

Considering that all sides of the square are 5 cms (since squares contain equal sides), according to the formula:

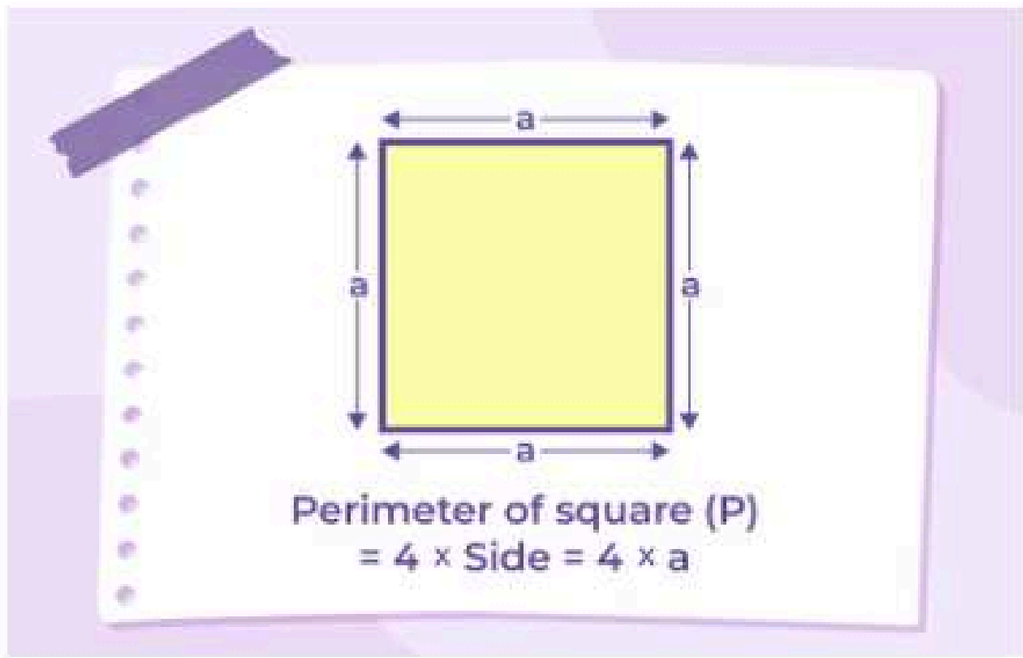
Area = Side x Side
= 5x5
= **25cms.**



Perimeter of a Square

The total distance around the edges of a square is known as its perimeter. Perimeters are not just calculated for squares, but for all objects and shapes available within geometry.

Formula:
Perimeter = 4a



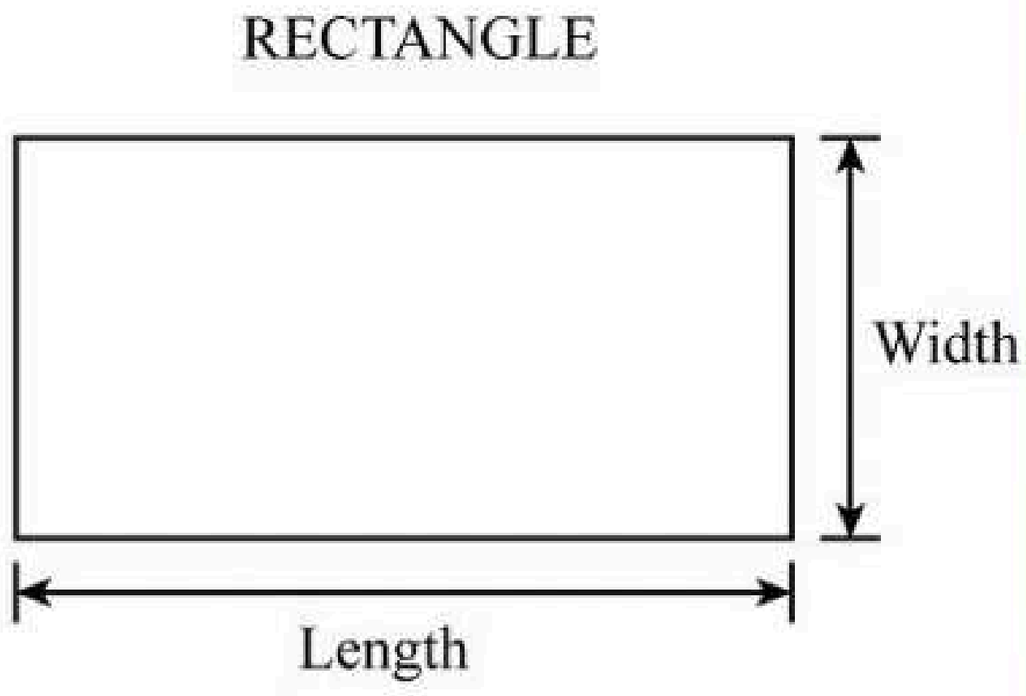
If the length of the side of a square is 5 cms, thus the perimeter is,

4a = 4x5
= **20cms.**

Area and Perimeter of Rectangles

The area of a rectangle is calculated by multiplying its length by its width.

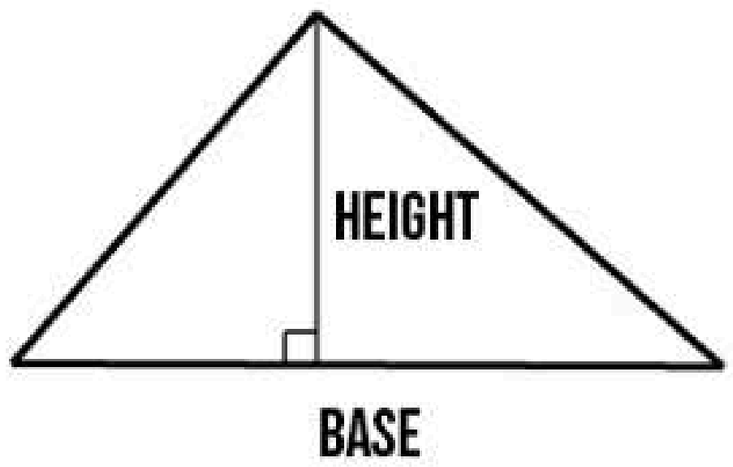
Therefore,
Area = *l* x *w*



If the length of a rectangle is 6 cms, and its width is 3 cms,
Area = 6 x 3
= **18cms.**

For the perimeter of a rectangle, the formula is:

Perimeter = 2 (*l* + *w*)
= 2 (6 + 3)
= **18cms.**



Triangle

The formula for the area of a triangle is:

Area = hbb/2

Therefore, if the height of the triangle is 10 and the base of the triangle is 5,
Area = 10 x 5 / 2
= 25cms.

For the perimeter of a triangle, we utilise the sides of a triangle. Unlike a square, the sides of a triangle can vary in its length.

Perimeter of a triangle = a + b + c
Thus, if side a = 6 cms
b = 7 cms
c = 8 cms

Perimeter = 6+7+8 = 21cms

Perimeter or Area?

For the following, guess what is required in order to calculate the relevant aspect of the objects in question:

1. In our example of constructing a house on a plot of land, the outer wall around the edges that is constructed for safety is to be calculated. Considering that it is the outer edges of the entire plot, what would be calculated here?

2. If the government wants to build an airport in a designated area within the country, they wish to calculate how large the airport would be, and what its spread would look like. Therefore, what would the government be calculating in this project?

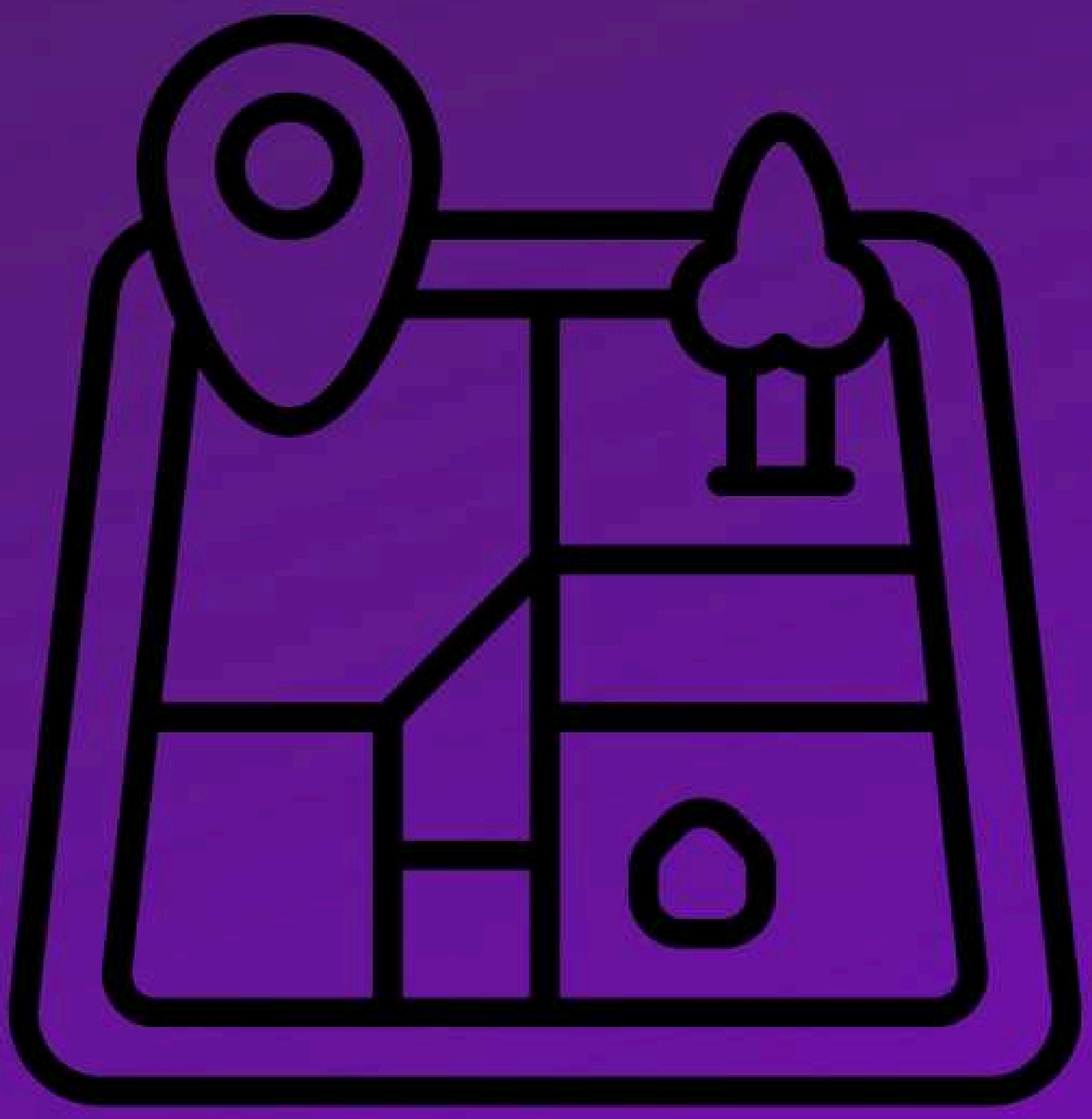
3. If you want to frame a picture, for which you are building a frame, what would you be calculating in order to make sure the picture fits inside the frame perfectly?

Activity - Design a Park!

As part of a project for the people living besides your school, you are tasked with planning a playground for the kids from the community.

The playground will be rectangular in shape, and its length will be a total of 300 metres and its width will be a total of 70 metres. The following are to be calculated:

1. How much space is required for the entire park to be constructed?
2. If the park needs fencing around its borders, what is the length of the fencing material required considering the dimensions have been shared above?



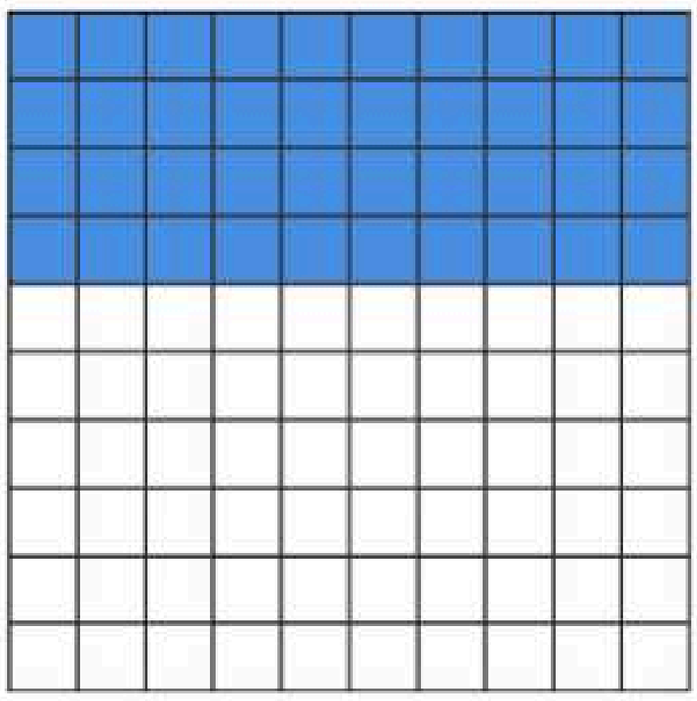
CHAPTER 4: MONEY MATHS

The shop board says "30% OFF". According to your report card, you have obtained 90%, and your mother says she puts away 10% of her income.

The same small sign, %, appears in all three. It is one of the most useful signs in maths, because it turns different things into a fair comparison. This chapter shows you how to use it.

What is Percentage

Per cent means "out of 100." Picture in your mind that there are 100 children standing in a row. If there are 40 girls among them, we have "40 out of 100", that is, 40%.



(Each square represents one child, so 40 are shaded, and 60 are not, which means that 40 of them are girls and 60 are boys. So out of 100 students, 40% of them are girls.)

Why do we always turn numbers into "out of 100"?

Say you scored 18 out of 20 in Maths and 27 out of 30 in Physics. Which one is actually better?

You cannot just compare 18 and 27; the two tests were not the same size, so that is not a fair comparison yet. We need to make them the same size first, and that is exactly what changing both to "out of 100" does.

How to turn any score into a percentage

Percentage = (what you scored ÷ total marks) × 100

- Maths: 18 ÷ 20 × 100 = 90%
- Physics: 27 ÷ 30 × 100 = 90%

(Tip: if dividing first feels hard, multiply first instead: 18 × 100 = 1800, then 1800 ÷ 20 = 90%)

Both scores land on 90%. Even though 27 looks bigger than 18 at first glance, once you compare them fairly, they are exactly equal. That is really the whole reason percentages exist. They let you compare things fairly, no matter how big each test was.

Practice:

- In 100 seats, 65 are filled. What percentage is filled?
- Write "35 out of 50" as a percentage.

Converting fractions and decimals into percentages

In real life, numbers do not always come "out of 100." A test might be out of 20 marks. A recipe might use ¾ cup of flour. A bottle might be filled to 0.6 of its capacity.

A fraction or a decimal tells us a part of one whole (1). A percentage tells us that same part, but out of 100. So, to turn "out of 1" into "out of 100," we multiply by 100.

Turning a Decimal into a Percentage

- Take the decimal
- Move the decimal point two places to the right. (This is a fast way to multiply by 100. No calculator needed)
- Add the % sign

Example: 0.6 → write it as 0.60 → take the two numbers next to the decimal → 60%

Turning a Fraction into a Percentage

- Multiply the top number (numerator) by 100.
- Divide the answer by the bottom number (denominator)
- Add the % sign.

Example: ¾ (3 × 100 = 300) (300 ÷ 4 = 75 → 75%)
Example: ½ (1 × 100 = 100) (100 ÷ 2 = 50 → 50%)

Say you scored 18 marks out of a 20-mark test. What percentage is that?

- 18 × 100 = 1800 (1800 ÷ 20 = 90 → 90%)

You scored 90%, meaning if the test had 100 questions, you would have gotten 90 of them right.

Practice:

- Write ⅖ as a percentage.
- Write 0.35 as a percentage.

Finding a Percentage of an Amount

This is a method that never fails. To start, calculate 1%. Next, multiply it.

Now, let's find 20% of ₹500. First, we will find 1% of ₹500 as follows:

- 1% of ₹500 (₹500 ÷ 100 = ₹5)
- Then we will multiply 1% by 20 in order to find 20% (20% = ₹5 × 20 = ₹100)
- You can just divide by 100, then multiply.

Practice:

How much is 10% of ₹250?
How much is 15% of ₹400?

Discount, Profit and Loss, Simple Interest

Discount: The T-shirt costs ₹800, and you get 25% off on this item.

Now calculate the discounted amount:

- Find 1% of ₹800, which is ₹8
- Now calculate that by 25% (₹8 × 25 = ₹200)
- So, you have saved ₹200. Now, minus the discount from the item's full amount: ₹800 − ₹200 = ₹600
- You pay ₹600

Profit and Loss

Anita buys mangoes at ₹200 (cost price) and resells the mangoes at ₹250 (selling price). Profit = ₹250 − ₹200 = ₹50. Profit % = (50 ÷ 200) × 100 = 25%. Profit/Loss is calculated on the cost price.

Now, calculate the profit:

- ₹250 − ₹200 = ₹50
- Find the profit percent: Profit % = (50 ÷ 200) × 100 = 25%
- Profit and Loss is calculated on the cost price.

Simple Interest

Whenever you take a loan or borrow money, there is some additional extra amount that you pay.
This extra amount is called interest.

SI = (P × R × T) ÷ 100

P refers to the money borrowed. **R** is the rate, and **T** is the time taken to repay.

For example, if you borrow ₹2,000 at 10% for 2 years: SI = (2000 × 10 × 2) ÷ 100 = ₹400, which means you will repay ₹2,400.

Practice:

- A purse costs ₹500 and is sold at 10% discount. Find the price after discount. How much would you pay?
- A bicycle purchased for ₹150 and sold for ₹120. Calculate the loss and the loss %.

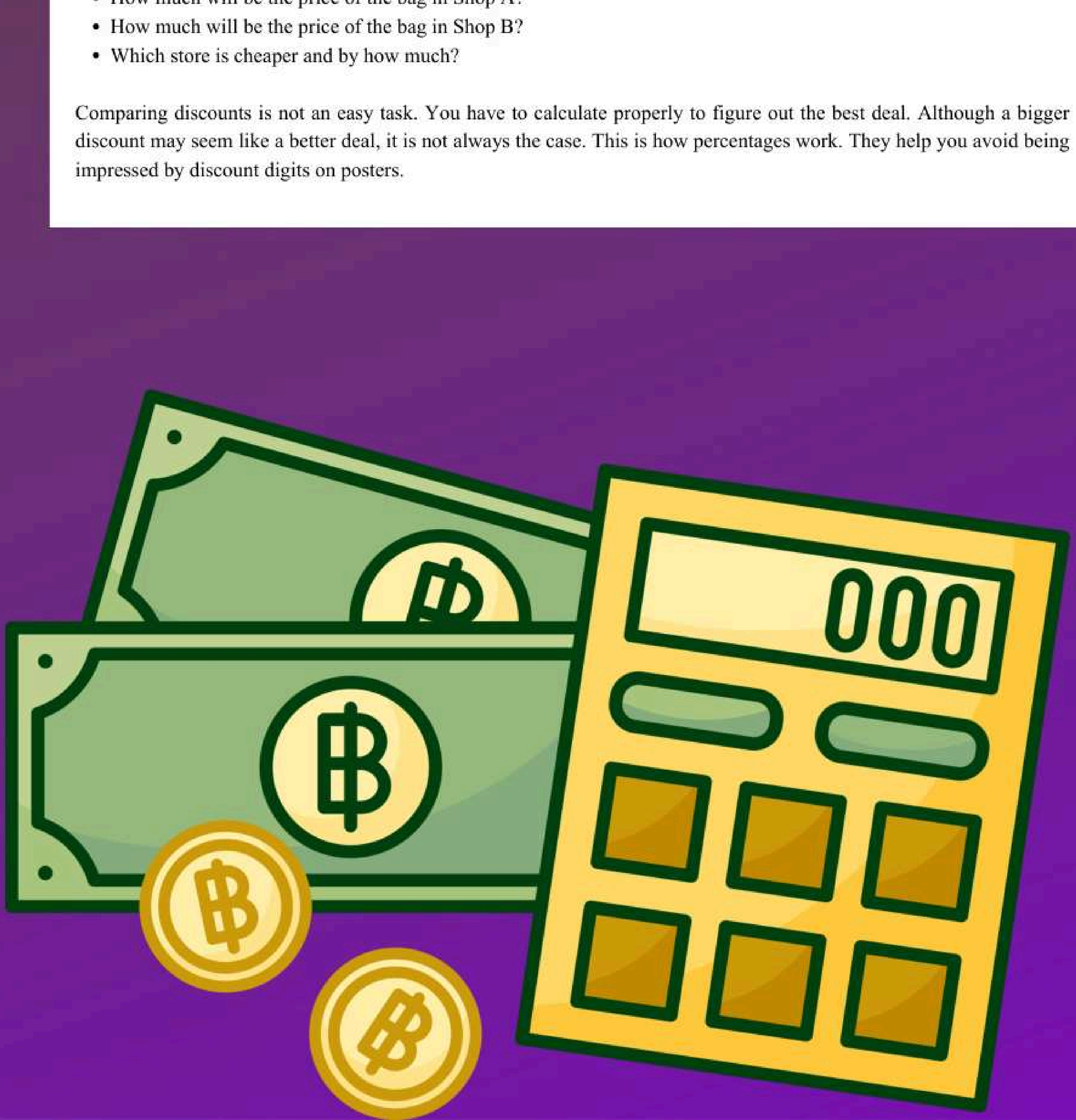
Activity: Shopping Challenge

You have to buy a school bag. There are two stores that sell the same bag.

	Shop A	**Shop B**
Price	₹600	₹700
Discount given	20%	30%

- How much will be the price of the bag in Shop A?
- How much will be the price of the bag in Shop B?
- Which store is cheaper and by how much?

Comparing discounts is not an easy task. You have to calculate properly to figure out the best deal. Although a bigger discount may seem like a better deal, it is not always the case. This is how percentages work. They help you avoid being impressed by discount digits on posters.



CHAPTER 5: READING AND UNDERSTANDING DATA

Data just means information written down as numbers. A cricket score, a bus timing, weather temperature, and the pocket money you get each week are all data.

Putting data into a table

A table gives every number its own place. Ask 30 classmates how they get to school, and you will get different answers.

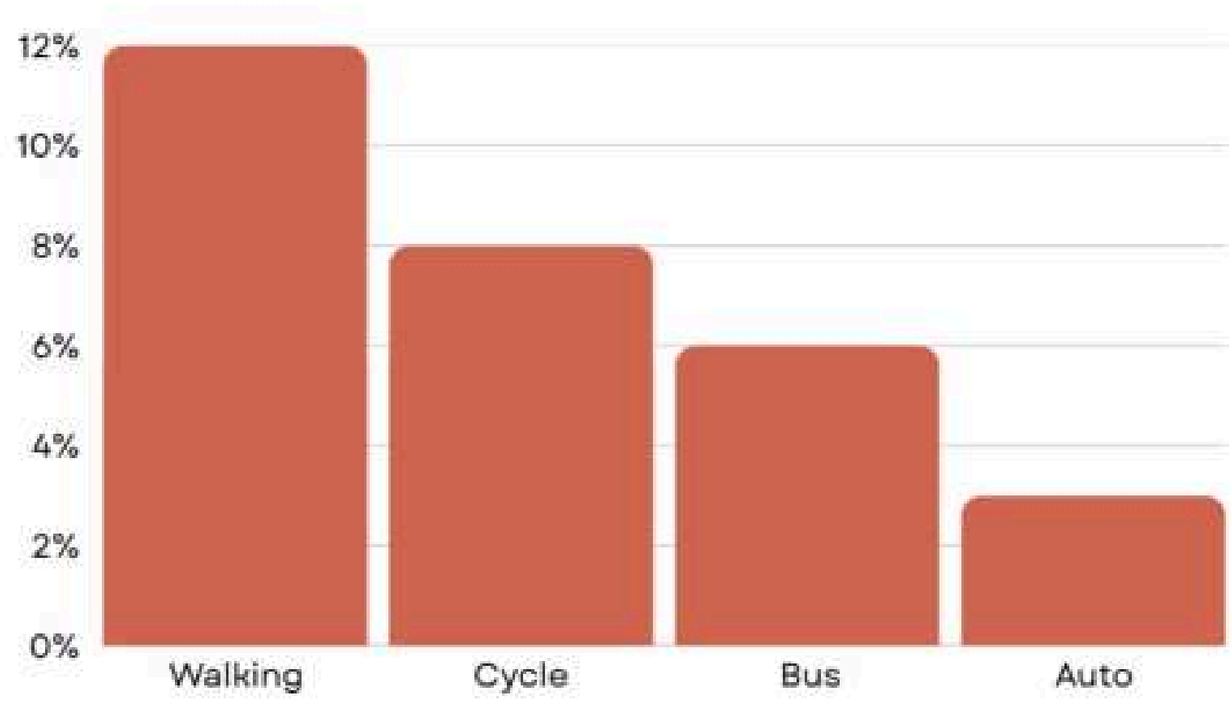
How they come	Number of students
Walking	12
Cycle	8
Bus	7
Auto	3
Total	30

Practice:

- In a class of 25, 10 like cricket, 8 like kabaddi, and 7 like football. Draw a table with a total row and enter the data.

Reading a bar graph

A bar graph turns a table into a picture. Each bar stands for one answer. The taller the bar, the bigger the number. Here is the school-transport table from above, drawn as a bar graph:



Example:

- Which bar is the tallest? Walking, at 12 students.
- How many came from Bus and Auto? 7 + 3 = 10 students.
-

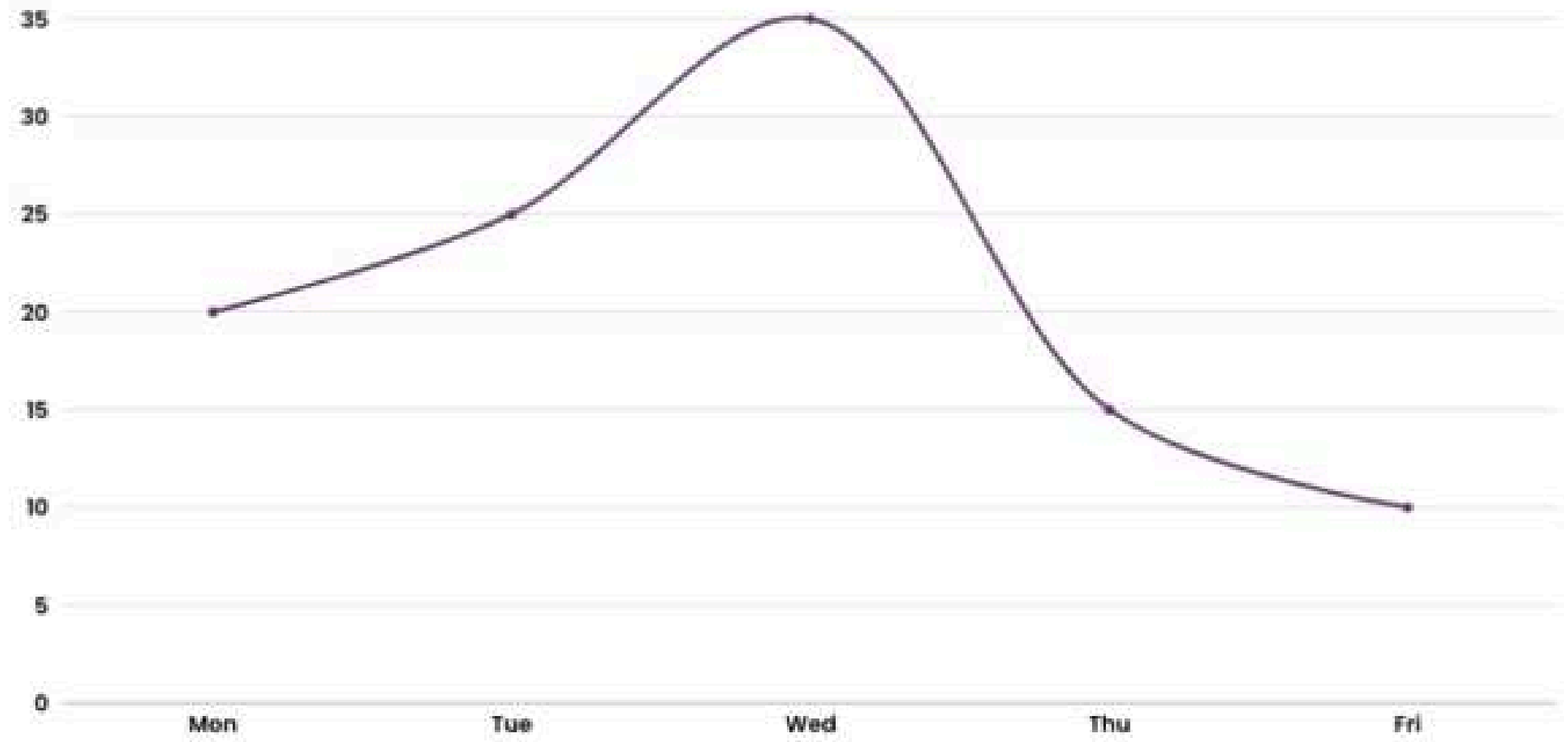
Practice (using the graph above):

1. How many come by bus?
2. Which is the smallest group?
3. How many come by cycle and walking together?

Reading a line graph

A line graph is for things that change over time. The dots are joined up, so you can see the number rise and fall at a glance. Here is the highest temperature each day last week:

Mon	Tue	Wed	Thu	Fri
20°C	25°C	35°C	15°C	10°C



Example: The temperature climbs up to Wednesday, then falls. The hottest day was Wednesday, at 35°C. From Monday to Wednesday, it rose 35 - 20 = 15°C.

Practice:

- Which was the coolest day?
- Between which two days did the temperature drop the most?

Finding the average

The average tells you what's usual. Add up all the numbers, then divide by how many numbers there are.

- A player scores 20, 35, 15, 40 and 30 runs in five matches.
- Add: 20 + 35 + 15 + 40 + 30 = 140
- Divide: 140 ÷ 5 = 28 runs

He never actually scored exactly 28 in any single match, but 28 is his usual score.

Practice: Your pocket money for five weeks was ₹10, ₹15, ₹20, ₹10 and ₹20. What's the average?

Activity: My community survey

Pick one question: "How many people live in your house?" or "How do you come to school?"

- Ask 10 family members or classmates, and write down each answer as you go.
- Put the answers into a table, with a total row.
- Draw a bar graph. Label both sides.
- Answer: What was the most common answer? The least common? What is the average?

Data is everywhere, on scoreboards, bus boards, and bills. Once you can build a table, draw a graph, and find an average, you stop just looking at numbers and start understanding them.



CHAPTER 6: EVERYDAY MATHS CHALLENGE

Welcome to the final chapter of the RE&L Work Math Workbook! Over the past 5 chapters, we've learnt how Math is a super effective way to make informed judgments in your day-to-day life; and serve as a subject that you can apply to almost anything.

So let's get right into your last challenge then.

Before we begin, how about we do a little revision of all that you've understood:

- **Patterns and Variables (Ch. 1):** Letters such as x represent unknown values and allow us to establish rules and solve equations.
- **Shapes and Angles (Ch. 2):** Angles (acute, right, obtuse) and 2D shapes help us make sense of spaces.
- **Measuring Spaces (Ch. 3):** Perimeter measures the boundary; Area measures the interior space.
- **Money Maths (Ch. 4):** Percentages ("out of 100") imply we can compare discounts, profits, and interest fairly.
- **Reading and Interpreting Data (Ch.5):** Numbers are shown in tables and graphs. The average indicates what is considered normal.

Quick Review Questions

Answers can be found at the end of the chapter

1. Solve for x: $x + 7 = 15$.
2. What is an angle that is smaller than 90 degrees?
3. Find the perimeter of a garden that is 10 m by 5 m.
4. A ₹500 shirt comes with a 20% discount. How much do you save?
5. What is the average of 10, 20 and 30?

Real-Life Scenarios

Rarely does a real-life problem have only one topic - more typically you need to combine tools. In this section, we will solve a few real-life problems. Each problem will need us to use more than one math skill to find the answer.

Don't worry if a problem looks long at first. We will break it into small steps and solve it one step at a time.

Scenario 1: Painting the School Wall

Your school wants to paint a wall that is 6 metres long and 3 metres high. One can of paint covers 9 square metres and costs ₹400. The paint shop is offering a 10% discount this week. How much will the school have to pay to paint the whole wall?

Let's solve it!

First, find the area of the wall:

6 × 3 = ___ square metres

One can covers 9 square metres, so:
___ ÷ 9 = ___ cans

Two cans cost:
___ × ₹400 = ₹___

The shop gives a 10% discount.
10% of ₹___ = ₹___

So the school pays: ____

(Answer: The school will pay ₹720.)

Scenario 2: A School Juice Stall

Your class is having a school event and decides to sell juice. You spend ₹200 on fruit, cups and other ingredients. You make 50 cups of juice and sell each cup for ₹6. Will you make a profit? If yes, how much?

Let's solve it!

You sell 50 cups at ₹6 each:

50 × ₹6 = ₹___

So, you collect ₹___ from selling the juice.

You spent ₹200 to make it.
₹___ − ₹200 = ₹___

So, your profit is ₹___.

You can also find the profit percentage:
₹___ ÷ ₹200 × ___ = ___%

(Answer: You make ₹100 profit, which is a 50% profit.)

Scenario 3: Choosing How to Travel

You travel to school and back home every day. A bus costs ₹20 for one trip, while an auto-rickshaw costs ₹100 for one trip. You make 2 trips every day — one to school and one back home. There are 20 school days in a month.Which option costs less, and how much money can you save by taking the bus?

Let's solve it!

The bus costs ₹20 per trip.

You make 2 trips: ₹20 × 2 = ₹___ per day
So, for 20 days:
₹ ___ × 20 = ₹___

Now let's calculate the auto:
₹100 × 2 = ₹___ per day

For 20 days:
₹___ × 20 = ₹___

The difference then is:
₹___ – ₹___ = ₹___

(Answer: The bus costs ₹800 for the month. The auto costs ₹4,000. You save ₹3,200 by taking the bus.)

The Maths for Life Challenge

Complete these exercises in your workbook. Answer the reflection prompt after each one!

Problem 1: The Fencing Project (Measurement and Algebra)

The playground is a rectangle of 50 m by 30 m. Wire is ₹20 a metre.

- **Q1a:** What is the perimeter?
- **Q1b:** Write C if C = Perimeter x 20.
- **Q1c:** Write the total price after giving a 10% discount on C.

- **Reflection:** Why did you calculate perimeter here and not area?

Problem 2: Profit & Savings (Percentages & Money)

Rohan bought 10 goods for ₹300 and sold them for ₹450.

- **Q2a:** Calculate his profit percentage.
- **Q2b:** How much does he save if he saves 20% of his profit?

- **Reflection:** What helped you to break this problem into steps?

Problem 3: Weather Graphs & Averages

Refer to the line graph in Chapter 5 (20°C, 25°C, 35°C, 15°C, 10°C).

- **Q3a:** What was the warmest day?
- **Q3b:** What is the average temperature every day?

- **Reflection:** Why is a line graph more useful than a table for identifying trends?

Problem 4: Discount Comparisons (Percentages, Budgeting)

Shop A: 20% off on a bag worth ₹600

Shop B: 30% Discount on Bag of ₹700

- **Q4a:** Calculate the final price in each shop.
- **Q4b:** Which is the better offer? By how much?

- **Reflection:** Why is a bigger discount not usually a cheaper price?

Well done for finishing the workbook! Remember this: Mathematics is not about speed or memorising rules; it is about being curious and taking time to think! Whether you're doing a pricing comparison, measuring a room, or breaking down data about your town, you'll carry these abilities for a lifetime. Keep investigating, keep questioning - maths is for all!



ANSWER KEY

Chapter 1:

Try It Yourself (Part 1)

1. 3
2. 16 and 19

Try It Yourself (Part 2)

1. 6
2. 7
3. 13

Try It Yourself (Part 3)

1. 7
2. 5
3. 7

Mystery Number Challenge

The Toy Shop

1. x + 15 = 45
2. x = 45 − 15 = 30
3. The toy cost the shopkeeper ₹30 to make.

The Storybooks

1. 60x= 300
2. x=300÷60, so x=5
3. Priya bought 5 storybooks

Chapter 3:

Perimeter or Area?

1. Perimeter
2. Area
3. Perimeter

Activity: Design a Park!

1. Area = 21,000 m²
2. Fencing required (Perimeter) = 740 m

Chapter 4:

Practice (Percentage Section)

1. 65%
2. 70%

Practice (Fractions into Percentage)

1. ⅖ = 40%
2. 0.35 = 35%

Practice (Finding the Percentage of an Amount)

1. 10% of ₹250 = ₹25
2. 15% of ₹400 = ₹60

Practice (Simple Interest)

1. Purse: ₹450 after discount. You would pay ₹450.
2. Bicycle: Loss = ₹30; Loss % = 20%.

Activity: Shopping Challenge

1. Shop A: ₹480
2. Shop B: ₹490
3. Cheaper store: Shop A
4. Difference: ₹10



ANSWER KEY

Chapter 5:

Practice (Putting Data into a Table)

How they come	Number of students
Cricket	10
Kabaddi	8
Football	7
Total	25

Practice (Reading a Bar Graph)

1. How many come by bus? → 7 students
2. Which is the smallest group? → Auto
3. How many come by cycle and walking together? → 20 students (8 + 12)

Practice (Reading a Line Graph)

1. Which was the coolest day? → Friday, at 10°C
2. Between which two days did the temperature drop the most? → Wednesday and Thursday (35°C → 15°C, a drop of 20°C)

Practice (Finding the Average)

1. Total = ₹75
2. Number of weeks = 5
3. Average = ₹15

Chapter 6:

Quick Review Questions:

1. x = 8
2. Acute angle
3. 30 m
4. ₹100 saved
5. 20

The Maths for Life Challenge:

Problem 1: The Fencing Project

- Q1a: 160 m
- Q1b: C = ₹3,200
- Q1c: ₹2,880
- Reflection: Because fencing goes around the boundary, so we need the perimeter, not the area.

ANSWER KEY

Problem 2: Profit & Savings

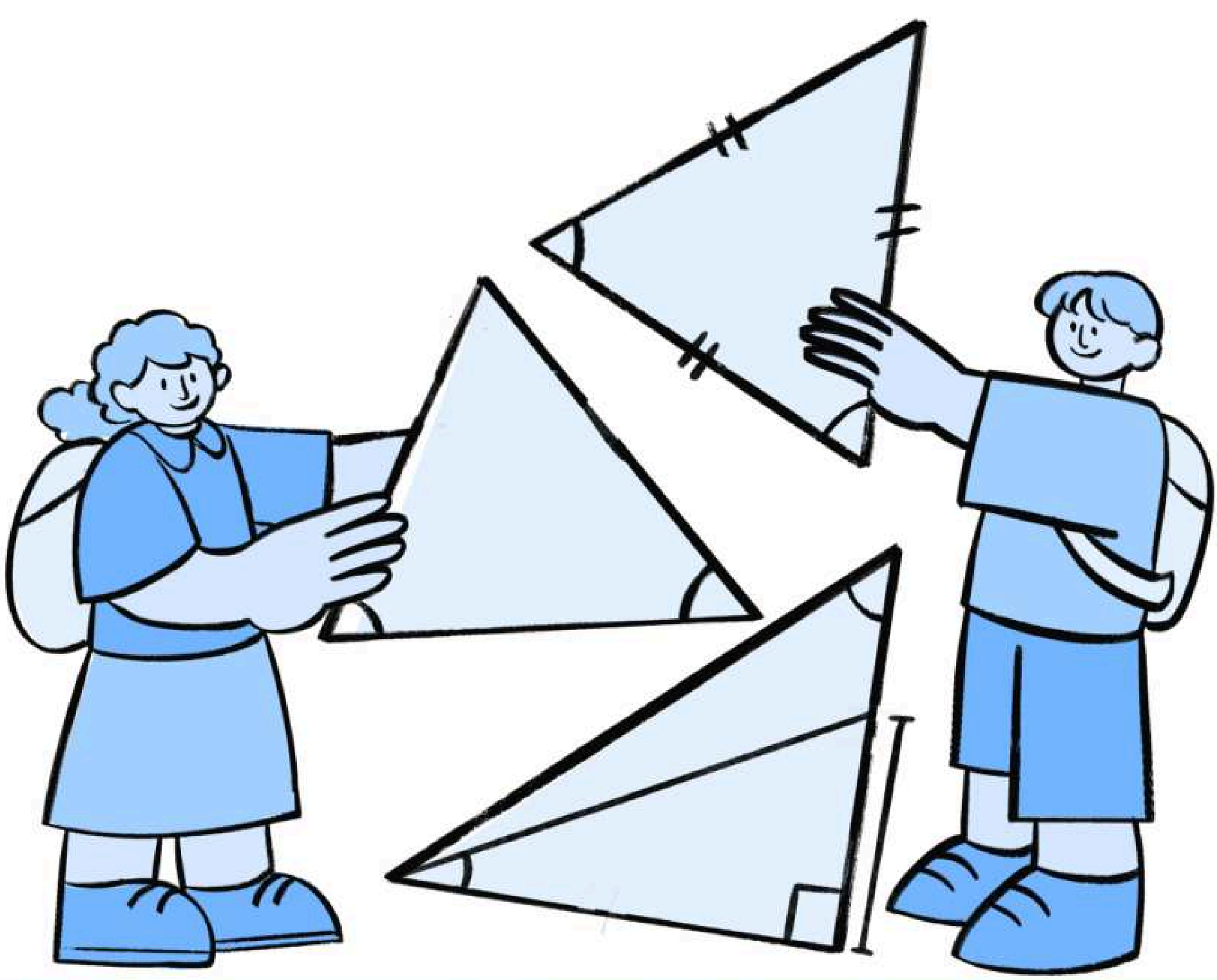
- Q2a: 50% profit
- Q2b: ₹30
- Reflection: By breaking the problem into smaller steps: first find the profit, then find the percentage of the profit saved.

Problem 3: Weather Graphs & Averages

- Q3a: Warmest = 35°C
- Q3b: 21°C
- Reflection: A line graph makes changes and trends easier to see quickly.

Problem 4: Discount Comparisons

- Q4a:
  - Shop A: ₹480
  - Shop B: ₹490
- Q4b: Shop A is the better offer by ₹10.
- Reflection: Because the discount is a percentage of the original price. A bigger percentage discount on a more expensive item does not always mean a lower final price.



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