G.S. PUBLIC SCHOOL, SUJANGARH

Best English Medium RBSE School in Sujangarh

RBSE • CLASS 5 • MATHEMATICS

Fractions

Complete chapter notes with diagrams, examples, rules and solved word problems — all 11 learning sections and key points to remember.

Prepared as per the latest **Rajasthan Board (RBSE)** syllabus • Session **2025–26**

Prepared by subject teachers at **G.S. Public School, Sujangarh (Churu, Rajasthan)**

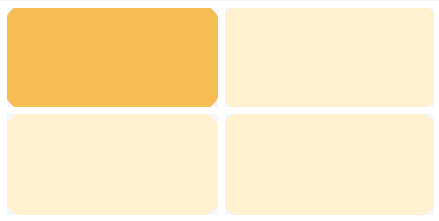
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1. What is a Fraction?

When a whole thing is divided into **equal parts**, each part is called a fraction of the whole. A fraction tells us how many equal parts we are talking about.

Example: Sita has one roti. She divides it into 4 equal parts and gives 1 part to her brother. Her brother gets 1 out of 4 equal parts, which we write as **1/4**.

Visual: One-fourth of a Roti



1 shaded part out of 4 equal parts = **1/4**

Orange = 1 selected part | Light yellow = remaining parts

2. Numerator and Denominator

Every fraction has two numbers with a line between them.

$$\frac{3}{8}$$

3 = Numerator

How many equal parts we are talking about.

8 = Denominator

Total number of equal parts in the whole.

Remember: The numerator is written above the line and the denominator is written below the line. The denominator can never be zero.

3. Fraction of a Collection

A fraction can also tell us about a part of a group of things. A chocolate bar is made of 8 equal pieces. If you eat 3 pieces, you have eaten **3/8** of the chocolate.

Chocolate Bar – 8 Equal Pieces



3 shaded pieces out of 8 = 3/8

Dark brown = Eaten | Light brown = Remaining

4. How We Read Fractions

Fraction	We read it as
1/2	One-half (a half)
1/3	One-third
1/4	One-fourth (a quarter)
2/3	Two-thirds
3/4	Three-fourths
2 1/2	Two and a half

5. Types of Fractions

Type	Meaning	Examples
Unit fraction	Numerator is 1.	1/2, 1/5, 1/9
Proper fraction	Numerator is smaller than denominator.	3/4, 5/8, 7/10
Improper fraction	Numerator is equal to or greater than denominator.	5/4, 9/9, 7/2
Mixed fraction	A whole number and a proper fraction together.	1 1/4, 3 1/2

Example: Improper Fraction to Mixed Fraction

4/4 + 1/4 = 5/4 = 1 1/4

5/4 means one complete whole and one-fourth more.

6. Equivalent Fractions

Fractions that show the **same part of a whole** are called equivalent fractions.

See how these fractions represent the same amount:

1/2



2/4



4/8



1/2 = 2/4 = 4/8

Rule: To make an equivalent fraction, multiply or divide both the numerator and denominator by the same number.

Example: $(1 \times 2)/(2 \times 2) = 2/4$ and $(1 \times 4)/(2 \times 4) = 4/8$.

7. Simplest Form of a Fraction

A fraction is in its **simplest form** (lowest terms) when its numerator and denominator have no common factor other than 1.

Example: Write 12/18 in its simplest form.

Step 1: Divide both by 2.

$$12/18 = 6/9$$

Step 2: Divide both by 3.

$$6/9 = 2/3$$

$$12/18 = 2/3$$

This is the simplest form.

Shortcut: Divide both numbers by 6 in one step.

8. Comparing Fractions

Like fractions (same denominator): The fraction with the bigger numerator is bigger.

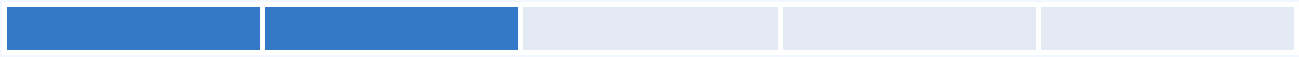
Example: $3/5 > 2/5$.

Compare 3/5 and 2/5

3/5 – Bigger fraction



2/5 – Smaller fraction



3/5 > 2/5

Unit fractions: The fraction with the smaller denominator is bigger, because the whole is cut into fewer equal parts.

1/2 > 1/3 > 1/4

One-half is greater than one-third and one-fourth.

9. Adding and Subtracting Like Fractions

Rule: To add or subtract like fractions, add or subtract the numerators and keep the denominator the same.

Addition

2/7 + 3/7 = 5/7

(2 + 3)/7 = 5/7

Subtraction

5/6 − 2/6 = 3/6 = 1/2

(5 − 2)/6 = 3/6. Simplify to 1/2.

10. Fractions on the Number Line

We can show fractions on a number line. Divide the space between 0 and 1 into 8 equal parts. Each part is 1/8.



3/8 is the third mark after 0.

11. Solved Word Problems

Problem 1: Ribbon Sharing

Seema bought a 5 metre long ribbon. She shares it equally among 4 friends. How much ribbon does each friend get?

Solution:

Each friend gets = 5 ÷ 4

= 5/4 metre

= **1 1/4 metres**

Problem 2: Sharing Milk

6 litres of milk is served equally to 12 children. How much milk does each child get?

Solution:

Each child gets = 6 ÷ 12

= 6/12

= **1/2 litre**

Problem 3: Reading a Book

Ram read 3/8 of his book in the morning and 2/8 in the evening. How much of the book did he read in all? How much is left?

Solution:

Read in all = 3/8 + 2/8

= 5/8

Remaining part = 8/8 − 5/8

= **3/8 of the book**

Key Points to Remember

- A fraction shows equal parts of a whole or a collection.
- The number above the line is the numerator.
- The number below the line is the denominator. It can never be zero.
- Types of fractions: unit, proper, improper and mixed.
- Equivalent fractions are made by multiplying or dividing both numbers by the same number.
- A fraction is in simplest form when its numerator and denominator have no common factor other than 1.
- To add or subtract like fractions, operate on the numerators and keep the denominator the same.
- Division can be written as a fraction: a ÷ b = a/b, where b is not zero.