



What are Decimals?

Understanding the Topic

- Decimals are numbers that include a dot (.) called the decimal point
- They help us show values smaller than 1 (parts of a whole)

A decimal number has two parts:

- The part before the decimal point – **Whole number**
- The part after the decimal point – **Decimal (fractional) part**

Example: In 3.75

- 3 is the whole number part
- .75 is the decimal part

Why do we need Decimals?

- To measure things more accurately like money, weight, length
- To show fractions in a simpler way
- To represent part of a whole number

Ten Thousands	Thousands	Hundreds	Tens	Ones		Tenths	Hundredths	Thousandths
10000	1000	100	10	1	Decimal point (.)	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
Whole Number (Whole Number Part)					Fractional Part (Decimal Part)			

Examples with Solutions

1. Money Example

- Rs. 5 and 50 paise = Rs. 5.50
- 50 paise = $\frac{50}{100} = 0.50$
- So, total amount = 5.50



2. Length Example

- Rope length = 2 meters and 25 centimeters
- $25 \text{ cm} = \frac{25}{100} = 0.25 \text{ meter}$
- Total length = 2.25 meters

3. Weight Example

- Watermelon weight = 3 kg and 750 grams
- $750 \text{ g} = \frac{750}{1000} = 0.75 \text{ kg}$
- Total weight = 3.75 kg

4. Fraction to Decimal

- Convert $\frac{1}{2}$ into decimal
- $1 \div 2 = 0.5$
- So, $\frac{1}{2} = 0.5$

5. Decimal Place Value

- In the number 4.36
- 4 is ones
- 3 is tenths = $\frac{3}{10}$
- 6 is hundredths = $\frac{6}{100}$
- $4.36 = 4 + \frac{3}{10} + \frac{6}{100}$

Summary Points

- A decimal shows a part of a whole using a dot (.).
- Used in money, measurements, and daily life.
- You can change fractions into decimals by dividing.
- Decimal places mean tenths, hundredths, etc.
- **Example:** 0.25 means $\frac{25}{100}$.