Expanded Form of Decimals

Understanding Expanded Form of Decimals

- Expanded form of a decimal shows the value of each digit according to its place
- It helps in understanding how much each digit represents
- Whole numbers are expanded as usual (like 45 = 40 + 5)
- Decimal parts are written as fractions of 10 or 100
- **Example:** $3.4 = 3 + \frac{4}{10}$

Key Points to Remember

- Digits to the left of the decimal point show whole numbers
- Digits to the right of the decimal point show fractions
- First place after decimal is tenths ($\frac{1}{10}$)
- Second place after decimal is hundredths ($\frac{1}{100}$)

Mixed Examples with Solutions

Example: Write the expanded form of 4.3

Solution: $4.3 = 4 + \frac{3}{10}$

Example: Write the expanded form of 5.06

Solution: $5.06 = 5 + \frac{0}{10} + \frac{6}{100}$

Example: Write the expanded form of 7.9

Solution: $7.9 = 7 + \frac{9}{10}$

Example: Write the expanded form of 2.45

Solution: $2.45 = 2 + \frac{4}{10} + \frac{5}{100}$

Example: Write the expanded form of 10.08

Solution: $10.08 = 10 + \frac{0}{10} + \frac{8}{100}$

Summary Points

- Expanded form of decimals breaks down the number based on place values.
- Whole number parts stay the same, decimal parts are written as fractions.
- Tenths = $\frac{1}{10}$, Hundredths = $\frac{1}{100}$.
- This form helps in better understanding of decimal values.
- It is useful in comparing and solving decimal problems accurately.