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Date: /

Page No.

CLASS- VI

Subject- Maths Chapter- Fractions

{PART- I}

FRACTIONS The numbers of the form $\frac{a}{b}$, where a and b are natural numbers, are called fractions.

Here, a is called the numerator and b the denominator of the fraction $\frac{a}{b}$.

Ex- $\frac{5}{9}$ is a fraction with numerator = 5 and denominator = 9

FRACTIONAL PART OF A COLLECTION

Example- Find $\frac{3}{4}$ of 12.

Solution-

$$\frac{3}{4} \text{ of } 12 = \frac{3}{\cancel{4}} \times \frac{\overset{3}{\cancel{12}}}{1} = \frac{9}{1} = 9$$

Example⇒ What fraction of a day is 8 hours ?

Sol- We know that

1 day = 24 hours

∴ the required fraction = $\frac{8}{24}$

Q1- Write a fraction for each of the following :

(i) three - fourths (ii) four - sevenths

(iii) two - fifths (iv) five - sixths

(v) eight - ninths (vi) Seven - twelfths

Q2. Write down the numerator and the denominator of each of the fractions given below:

(i) $\frac{4}{9}$ (ii) $\frac{6}{11}$

(iii) $\frac{8}{15}$ (iv) $\frac{12}{17}$

(v) $\frac{5}{1}$ (vi) $\frac{3}{8}$

Teacher's Sign.

Q3- Write down the fraction in which

(i) numerator = 3, denominator = 8
(ii) numerator = 5, denominator = 12
(iii) numerator = 7, denominator = 16
(iv) numerator = 8, denominator = 15

Q4- What fraction of an hour is 24 minutes?

Q5. Determine

(i) $\frac{2}{3}$ of 15 pens (ii) $\frac{2}{3}$ of 27 balls

(iii) $\frac{2}{9}$ of 36 ballons (iv) $\frac{3}{4}$ of 16 cups

(v) $\frac{3}{4}$ of 28 rackets

Types of fractions

PROPER FRACTIONS A fraction whose numerator is less than its denominator is called a proper fraction.

Ex- $\frac{2}{3}, \frac{5}{8}, \frac{7}{11}, \frac{0}{4}$ etc... are all proper fractions.

IMPROPER FRACTIONS A fraction whose numerator is greater than or equal to its denominator is called an improper fraction.

Thus $\frac{5}{4}, \frac{7}{3}, \frac{8}{5}$ etc... are all improper fractions.

MIXED FRACTIONS A combination of a whole number and a proper fraction is called a mixed fraction.

Ex- $2\frac{1}{3}, 3\frac{2}{5}$ etc... are all mixed fractions

Teacher's Sign.

Q6. Which of the following are proper fractions?

$\frac{1}{2}, \frac{3}{5}, \frac{10}{7}, \frac{7}{4}, 2, \frac{15}{8}, \frac{16}{16}, \frac{10}{11}$

Q7. Which of the following are improper fractions ?

$\frac{3}{2}, \frac{5}{6}, \frac{9}{4}, \frac{8}{8}, 3, \frac{27}{16}, \frac{23}{31}, \frac{19}{18}, \frac{10}{13}$

Q8. Write six improper fraction with denominator 5.

Q9. Convert each of the following in to an improper fraction.

(i) $5\frac{5}{7}$ (ii) $9\frac{3}{8}$ (iii) $6\frac{3}{10}$

(iv) $10\frac{9}{14}$ (vi) $12\frac{7}{15}$

Q 10. Convert each of the following in to a mixed fraction:

(i) $\frac{17}{5}$ (ii) $\frac{62}{7}$ (iii) $\frac{101}{8}$

(iv) $\frac{95}{13}$ (v) $\frac{81}{11}$

Q 11. Write five fractions equivalent to each of the following

(i) $\frac{2}{3}$ (ii) $\frac{4}{5}$ (iii) $\frac{5}{8}$

(iv) $\frac{7}{10}$ (v) $\frac{3}{7}$

Q 12. Reduce each of the following fractions in to its simplest form:

(i) $\frac{9}{15}$ (ii) $\frac{48}{60}$ (iii) $\frac{84}{98}$ (iv) $\frac{150}{60}$

Q 13. Show that each of the following fractions is in the simplest form:

(i) $\frac{8}{11}$ (ii) $\frac{9}{14}$ (iii) $\frac{25}{36}$ (iv) $\frac{8}{15}$ (v) $\frac{21}{10}$

Teacher's Sign.