Access answers to Maths NCERT Solutions for Class 7 Chapter 2 – Fractions and Decimals Exercise 2.4

1. Find:

(i) 12 ÷ ¾

Solution:-

We have,

= 12 × reciprocal of ¾

= 12 × (4/3)

= 4 × 4

= 16

(ii) 14 ÷ (5/6)

Solution:-

We have,

= 14 × reciprocal of (5/6)

= 14 × (6/5)

= 84/5

(iii) 8 ÷ (7/3)

Solution:-

We have,

= 8 × reciprocal of (7/3)

= 8 × (3/7)

= (24/7)

(iv) 4 ÷ (8/3)

Solution:-

We have,

= 4 × reciprocal of (8/3)

= 4 × (3/8)

= 1 × (3/2)

= 3/2

(v) 3 ÷ $2\frac{1}{3}$

Solution:-

While dividing a whole number by a mixed fraction, first convert the mixed fraction into improper fraction

We have,

$=2\frac{1}{3}$= 7/3

Then,

= 3 ÷ (7/3)

= 3 × reciprocal of (7/3)

= 3 × (3/7)

= 9/7

(vi) 5 ÷ $3\frac{4}{7}$

Solution:-

While dividing a whole number by a mixed fraction, first convert the mixed fraction into improper fraction

We have,

$=3\frac{4}{7}$= 25/7

Then,

= 5 ÷ (25/7)

= 5 × reciprocal of (25/7)

= 5 × (7/25)

= 1 × (7/5)

= 7/5

2. Find the reciprocal of each of the following fractions. Classify the reciprocals as proper fractions, improper fractions and whole numbers.

(i) 3/7

Solution:-

Reciprocal of (3/7) is (7/3) [∵ ((3/7) × (7/3)) = 1]

So, it is an improper fraction.

Improper fraction is that fraction in which numerator is greater than its denominator.

(ii) 5/8

Solution:-

Reciprocal of (5/8) is (8/5) [∵ ((5/8) × (8/5)) = 1]

So, it is an improper fraction.

Improper fraction is that fraction in which numerator is greater than its denominator.

(iii) 9/7

Solution:-

Reciprocal of (9/7) is (7/9) [∵ ((9/7) × (7/9)) = 1]

So, it is a proper fraction.

A proper fraction is that fraction in which denominator is greater than the numerator of the fraction.

(iv) 6/5

Solution:-

Reciprocal of (6/5) is (5/6) [∵ ((6/5) × (5/6)) = 1]

So, it is a proper fraction.

A proper fraction is that fraction in which denominator is greater than the numerator of the fraction.

(v) 12/7

Solution:-

Reciprocal of (12/7) is (7/12) [∵ ((12/7) × (7/12)) = 1]

So, it is a proper fraction.

A proper fraction is that fraction in which denominator is greater than the numerator of the fraction.

(vi) 1/8

Solution:-

Reciprocal of (1/8) is (8/1) or 8 [∵ ((1/8) × (8/1)) = 1]

So, it is a whole number.

Whole numbers are collection of all positive integers including 0.

(vii) 1/11

Solution:-

Reciprocal of (1/11) is (11/1) or 11 [∵ ((1/11) × (11/1)) = 1]

So, it is a whole number.

Whole numbers are collection of all positive integers including 0.

3. Find:

(i) (7/3) ÷ 2

Solution:-

We have,

= (7/3) × reciprocal of 2

= (7/3) × (1/2)

= (7 × 1) / (3 × 2)

= 7/6

$=1\frac{1}{6}$

(ii) (4/9) ÷ 5

Solution:-

We have,

= (4/9) × reciprocal of 5

= (4/9) × (1/5)

= (4 × 1) / (9 × 5)

= 4/45

(iii) (6/13) ÷ 7

Solution:-

We have,

= (6/13) × reciprocal of 7

= (6/13) × (1/7)

= (6 × 1) / (13 × 7)

= 6/91

(iv) $4\frac{1}{3}$ ÷ 3

Solution:-

First covert the mixed fraction into improper fraction.

We have,

=$4\frac{1}{3}$= 13/3

Then,

= (13/3) × reciprocal of 3

= (13/3) × (1/3)

= (13 × 1) / (3 × 3)

= 13/9

(iv) 3 ½ ÷ 4

Solution:-

First covert the mixed fraction into improper fraction.

We have,

= 3 ½ = 7/2

Then,

= (7/2) × reciprocal of 4

= (7/2) × (1/4)

= (7 × 1) / (2 × 4)

= 7/8

(iv) $4\frac{3}{7}$ ÷ 7

Solution:-

First covert the mixed fraction into improper fraction.

We have,

=$4\frac{3}{7}$= 31/7

Then,

= (31/7) × reciprocal of 7

= (31/7) × (1/7)

= (31 × 1) / (7 × 7)

= 31/49

4. Find:

(i) (2/5) ÷ (½)

Solution:-

We have,

= (2/5) × reciprocal of ½

= (2/5) × (2/1)

= (2 × 2) / (5 × 1)

= 4/5

(ii) (4/9) ÷ (2/3)

Solution:-

We have,

= (4/9) × reciprocal of (2/3)

= (4/9) × (3/2)

= (4 × 3) / (9 × 2)

= (2 × 1) / (3 × 1)

= 2/3

(iii) (3/7) ÷ (8/7)

Solution:-

We have,

= (3/7) × reciprocal of (8/7)

= (3/7) × (7/8)

= (3 × 7) / (7 × 8)

= (3 × 1) / (1 × 8)

= 3/8

(iv) $2\frac{1}{3}$ **÷ (3/5)**

Solution:-

First covert the mixed fraction into improper fraction.

We have,

=$2\frac{1}{3}$= 7/3

Then,

= (7/3) × reciprocal of (3/5)

= (7/3) × (5/3)

= (7 × 5) / (3 × 3)

= 35/9

(v) 3 ½ ÷ (8/3)

Solution:-

First covert the mixed fraction into improper fraction.

We have,

= 3 ½ = 7/2

Then,

= (7/2) × reciprocal of (8/3)

= (7/2) × (3/8)

= (7 × 3) / (2 × 8)

= 21/16

(vi) (2/5) ÷ 1 ½

Solution:-

First covert the mixed fraction into improper fraction.

We have,

= 1 ½ = 3/2

Then,

= (2/5) × reciprocal of (3/2)

= (2/5) × (2/3)

= (2 × 2) / (5 × 3)

= 4/15

(vii) $3\frac{1}{5} \div 1\frac{2}{3}$

Solution:-

First covert the mixed fraction into improper fraction.

We have,

=$3\frac{1}{5}$= 16/5

=$1\frac{2}{3}$= 5/3

Then,

= (16/5) × reciprocal of (5/3)

= (16/5) × (3/5)

= (16 × 3) / (5 × 5)

= 48/25

(viii) $2\frac{1}{5} \div 1\frac{1}{5}$

Solution:-

First covert the mixed fraction into improper fraction.

We have,

$=2\frac{1}{5}$= 11/5

$=1\frac{1}{5}$= 6/5

Then,

= (11/5) × reciprocal of (6/5)

= (11/5) × (5/6)

= (11 × 5) / (5 × 6)

= (11 × 1) / (1 × 6)

= 11/6