પુ॰ના International School
Shree Swaminarayan Gurukul, Zundal

# Grade -6
# MATHS
# Specimen copy
# Year 21-22

# INDEX

# Notes
# CHAPTER – 7
# Fractions

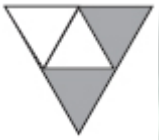
## What have we discussed?

- A fraction is a number representing a part of a whole. The whole may be a single object or a group of objects.
- When expressing a situation of counting parts to write a fraction, it must be ensured that all parts are equal.
- In 57, 5 is called the numerator and 7 is called the denominator.
- Fractions can be shown on a number line. Every fraction has a point associated with it on the number line.
- In a proper fraction, the numerator is less than the denominator. The fractions, where the numerator is greater than the denominator are called improper fractions. An improper fraction can be written as a combination of a whole and a part, and such fraction then called mixed fractions.
- Each proper or improper fraction has many equivalent fractions. To find an equivalent fraction of a given fraction, we may multiply or divide both the numerator and the denominator of the given fraction by the same number.
- A fraction is said to be in the simplest (or lowest) form if its numerator and the denominator have no common factor except 1.

# Chap – 7

# Ex : 7.1

**(1).** Write the fraction representing the shaded portion.



**Sol.** 24

**1(2).** The fraction representing the shaded portion.

**Sol.** 89

**1(3).** The fraction representing the shaded portion:

**Sol.** 48

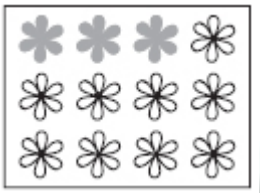
**1(4).** Write the fraction representing the shaded portion:

**Sol.** 14

**1(5).** Write the fraction representing the shaded portion -

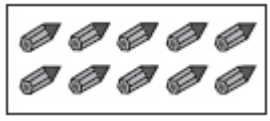
**Sol.** 37

**1(6).** Write the fraction representing the shaded portion:-



**Sol.** 312

**1(7).** Write fraction representing the shaded portion:



**Sol.** 1010

**1(8).** Write fraction representing the shaded portion-

**Sol.** 49

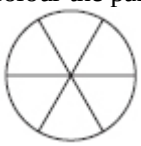
**1(9).** Write the fraction representing the shaded portion

**Sol.** 48

**1(10).** Write the fraction representing the shaded portion :

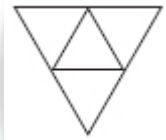
**Sol.** 12

**2(1).** Colour the part according to the given fraction : 16



**Sol.**

**2(2).** Colour the part according to the given fraction : 14



**Sol.**

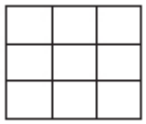
**2(3).** Colour the part according to the given fraction: 13

**Sol.**

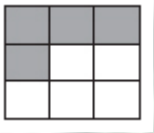
**2(4).** Colour the part according to the given fraction 34 :

**Sol.**

**2(5).** Colour the part according to the given fraction 49:



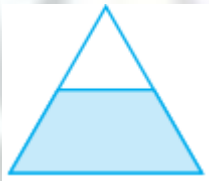
**Sol.**



**3(1).** Identify the error, if any

this is 12

**Sol.** We know that,
A fraction is a number that represents part of a whole and the parts need to be equally divided.



Here,
The whole may be a single object or a group of objects.
But from the above, figure, we can see that,
It is not divided into equal parts.
Hence,
The given figures do not represent the given fraction.

**3(2).** Identify the error, if any

this is 14

**Sol.** We know that,
A fraction is a number that represents part of a whole and the parts needs to be equally divided.

Here,

we can see that,
The given figure is not divided into equal parts.
Hence,
The given figure does not represent the given fraction.

**3(3).** Identify the error, if any

this is 34

**Sol.** We know that,
A fraction is a number that represents part of a whole and the parts needs to be equally divided.

Here,
we can see that,
The shape is not divided into equal parts.
Hence,
The given figure does not represent the fraction.

**4.** What fraction of a day is 8 hours?

**Sol.** 1 day = 24 hours
∴ Required fraction =824=8÷824÷8=13

**5.** What fraction of an hour is 40 minutes?

**Sol.** 1 hour = 60 minutes
∴ Required fraction = 6040=60÷1040÷10=64=6÷24÷2=32

**6(1).** Arya, Abhimanyu, and Vivek shared lunch. Arya has brought two sandwiches, one made of vegetables and one of jam. The other two boys forgot to bring their lunch. Arya agreed to share his sandwiches so that each person will have an equal share of each sandwich.
How can Arya divide his sandwiches so that each person has an equal share?

**Sol.** Given that,
Arya has brought two sandwiches, one made of vegetables and the other of jam.
Therefore,
To divide both the sandwiches equally among them,
He will divide each sandwich into three equal parts.

and he will give one part of each sandwich to each one of them.

**6(2).** Arya, Abhimanyu, and Vivek shared lunch. Arya has brought two sandwiches, one made of vegetables and one of jam. The other two boys forgot to bring their lunch. Arya agreed to share his sandwiches so that each person will have an equal share of each sandwich.
What part of a sandwich will each boy receive?

**Sol.** Here, each sandwich is divided into three equal parts.
Hence,
Each boy will get 13 part of each sandwich.

**7.** Kanchan dyes dresses, she had to dye 30 dresses. She has so far finished 20 dresses. What fraction of dresses has she finished?

**Sol.** Kanchan had dyes 30 dresses. She has finished 20 dresses.
So fraction of dresses she has finished = 2030=20÷1030÷10=23
∴ She has finished 23 fraction of the dresses.

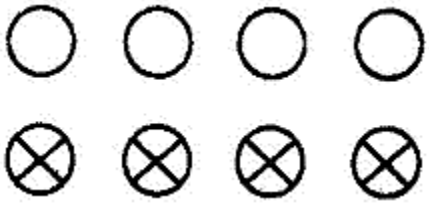
**8.** Write the natural numbers from 2 to 12. What fraction of them are prime numbers ?

**Sol.** The natural numbers from 2 to 12 are 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12
Total number of natural numbers from 2 to 12 = 11
Out of these, the prime numbers are 2, 3, 5, 7, 11
Total number of prime numbers from 2 to 12 = 5
∴ Required fraction = 511

**9.** Write the natural numbers from 102 to 113. What fraction of them are prime numbers ?

**Sol.** The natural numbers from 102 to 113 are
102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112 and 113
Total number of natural numbers = 12
Out of these, the prime numbers are 103, 107, 111, 113.
Total number of these prime numbers = 4
∴ Required fraction = 412=4÷412÷4=13

**10.** What fraction of these circles have 'X's in them?



**Sol.** Total number of circles = 8
Numbers of circles which 'X's in them = 4
∴ Required fraction = 48=4÷48÷4=12

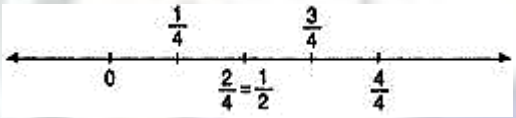
**11.** Krishna received a CD player for her birthday. She bought 3 CDs and received 5 others as gifts. What fraction of her total CDs did she buy and what fraction did she receive as gifts?

**Sol.** Numbers of CDs bought = 3
Number of CDs received as gifts = 5
∴ Total number of CDs = 3 + 5 = 8
∴ Fraction of her total CDs that she bought= 38
and, fraction of her total CDs that received as gifts= 58 .

# EX : 7.2

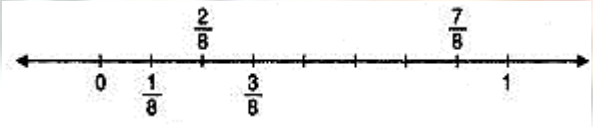
**1(1).** Draw number line and locate the points on them: 12,14,34,44

**Sol.**



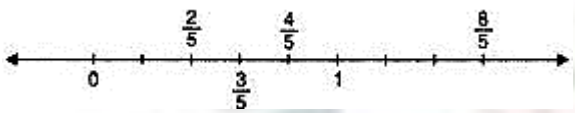

**1(2).** Draw number line and locate the points on them: 18,28,38,78.

**Sol.**




**1(3).** Draw number line and locate the points on them: 25,35,85,45

**Sol.**




**Question 2.** Express the following fractions as mixed fractions:

(a) $\frac{20}{3}$ (b) $\frac{11}{5}$ (c) $\frac{17}{7}$ (d) $\frac{28}{5}$ (e) $\frac{19}{6}$ (f) $\frac{35}{9}$

**Answer:** (a)

(b)

$$\begin{array}{r} 6 \\ 3\overline{)\ 20\ (} \\ -18 \\ \hline 2 \\ \hline \end{array}$$

$\frac{20}{3} = 6\frac{2}{3}$

$$5\overline{)\,11\,(\,2}$$
$$\underline{10}$$
$$1$$

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

(c)

$$7\overline{)\,17\,(\,2}$$
$$\underline{14}$$
$$3$$

$\therefore \frac{17}{7} = 2\frac{3}{7}$

(d)

$$5\overline{)\,28\,(\,5}$$
$$\underline{25}$$
$$3$$

$\therefore \frac{28}{5} = 5\frac{3}{5}$

(e)

$$6\overline{)\,19\,(\,3}$$
$$\underline{18}$$
$$1$$

$\frac{19}{6} = 3\frac{1}{6}$

(f)

$$9\overline{)\,35\,(\,3}$$
$$\underline{27}$$
$$8$$

$\therefore \frac{35}{9} = 3\frac{8}{9}$

**Question 3.** Express the following as improper fractions:

(a) $7\frac{3}{4}$ (b) $5\frac{6}{7}$ (c) $2\frac{5}{6}$ (d) $10\frac{3}{5}$ (e) $9\frac{3}{7}$ (f) $8\frac{4}{9}$

**Answer:** (a) $7\frac{3}{4} = \frac{(7\times4)+3}{4} = \frac{28+3}{4} = \frac{31}{4}$

(b) $5\frac{6}{7} = \frac{(5\times7)+6}{7} = \frac{35+6}{7} = \frac{41}{7}$

(c) $2\frac{5}{6} = \frac{(2\times6)+5}{6} = \frac{12+5}{6} = \frac{17}{6}$

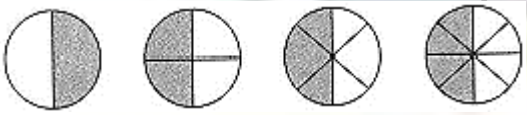
(d) $10\frac{3}{5} = \frac{(10\times5)+3}{5} = \frac{50+3}{5} = \frac{53}{5}$

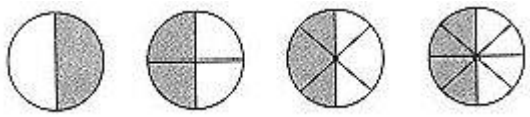
(e) $9\frac{3}{7} = \frac{(9\times7)+3}{7} = \frac{63+3}{7} = \frac{66}{7}$

(f) $8\frac{4}{9} = \frac{(8\times9)+4}{9} = \frac{72+4}{9} = \frac{76}{9}$

## Ex: 7.3

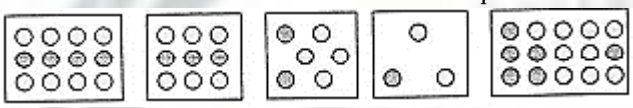
**1(1).** Write the fractions. Are all these fraction equivalent?

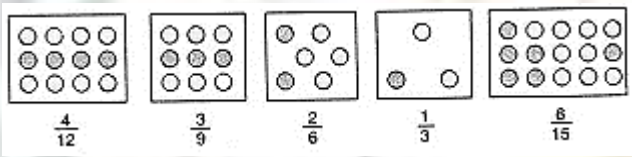


**Sol.** 

The first figure represents 1 shaded parts out of 2 equal parts= 12
The second figure represents 2 shaded parts out of 4 equal parts= 24=2÷24÷2=12
The third figure represents 3 shaded parts out of 6 equal parts. 36=3÷36÷6=12
The fourth figure represents 4 shaded parts out of 8 equal parts. 48=4÷48÷4=12
So, all these fractions are equivalent.

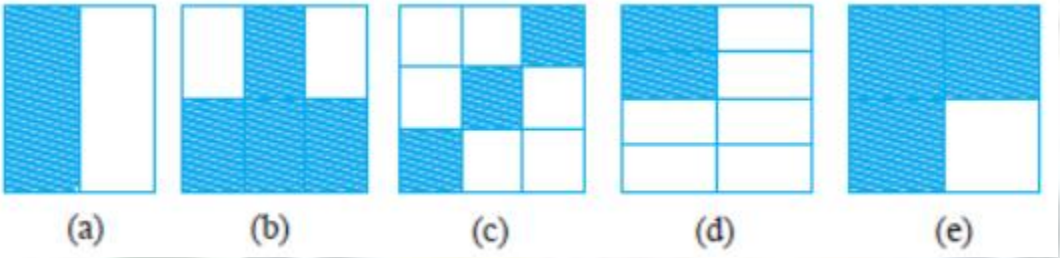
**1(2).** Write the fractions. Are all these fraction equivalent ?

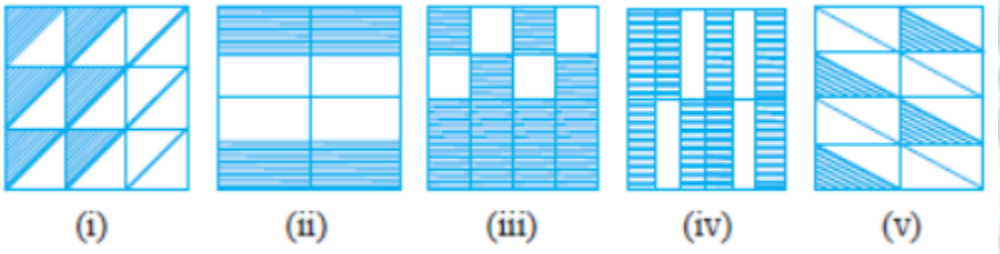


**Sol.** 


The figure (i) represents 4 shaded circles out of 12 circles. So 412=4÷412÷4=13 [∴HCF (4, 12) = 4]
The figure (ii) represents 3 shaded circles out of 9 circles. So 39=3÷39÷3=13 [∴HCF (3, 9) = 3]
The figure (iii) represents 2 shaded circles out of 6 circles. So 26=2÷26÷2=13 [∴HCF (2, 6) = 2]
The figure (iv) represents 1 shaded circle out of 3 circles. So 13
The figure (v) represents 6 shaded circles out of 15 circles. So 615=6÷315÷3=25 [∴HCF (6, 15) = 3]
So, all these fractions are not equivalent.

**2.** Write the fractions and pair up the equivalent fractions from each row.




**Sol.** a. Here,
The figure is divided into two equal parts
And,
One part is shaded out of these two parts
Hence,

The figure represents a fraction of 12.

b. Here,
The figure is divided into six equal parts
And,
Four parts are shaded out of these six parts
Hence,
The figure represents a fraction of 46 or 23

c. Here,
The figure is divided into nine equal parts
And,
Three parts are shaded out of these nine parts
Hence,
The figure represents a fraction of 39 or 13

d. Here,
The figure is divided into nine equal parts
And,
Three parts are shaded out of these nine parts
Hence,
The figure represents a fraction of 28 or 14

e. Here,
The figure is divided into four equal parts
And,
Three parts are shaded out of these four parts
Hence,
The figure represents a fraction of 34

i. Here,
The figure is divided into eighteen equal parts
And,
Six parts are shaded out of these eighteen parts
Hence,
The figure represents a fraction of 618 or 13

ii. Here,
The figure is divided into eight equal parts
And,
Four parts are shaded out of these eight parts
Hence,
The figure represents a fraction of 48 or 12

iii. Here,
The figure is divided into sixteen equal parts
And,
Twelve parts are shaded out of these sixteen parts
Hence,
The figure represents a fraction of 1216 or 34

iv. Here,
The figure is divided into twelve equal parts
And,
Eight parts are shaded out of these twelve parts
Hence,
The figure represents a fraction of 812 or 23

v. Here,
The figure is divided into sixteen equal parts
And,
Four parts are shaded out of these sixteen parts

Hence,

The figure represents a fraction of 416 or 14

Pair up with the equivalent fractions: (a) - (ii), (b) - (iv), (c) - (i), (d) - (v), (e) - (iii)

**3(1).** Replace □ by the correct number: 27=8□

**Sol.** If value taken as m

27=8m

∴ $2 \times m = 7 \times 8$

∴ m=7×82=562=28

∴ $m = 28$

∴27=828

**3(2).** Replace □ by the correct number: 58=10□

**Sol.** 58=10m

∴ $5 \times m = 8 \times 10$

∴ m=8×105

∴ m=805

∴ m = 16

∴58=1016

**3(3).** Replace □ by the correct number: 35=□20

**Sol.** 35=a20

∴ $3 \times 20 = 5 \times a$

∴a=3×205=605

∴ $a = 12.$

∴35=1220

**3(4).** Replace □ by the correct number: 4560=15□

**Sol.** 4560=15a

∴ $45 \times a = 60 \times 15$

∴ a=60×1545=90045

∴ $a = 20$

∴4560=1520

**3(5).** Replace □ by the correct number: 1824=□4

**Sol.** 1824=a4

∴ $18 \times 4 = 24 \times a$

∴ a =18×424=7224

∴ a = 3

∴1824=34

**4(1).** Find the equivalent fraction 35 having denominator 20.

**Sol.** $35=\frac{3\times 45}{\times 4}=\frac{12}{20}$

**4(2).** Find the equivalent fraction$35$ having numerator 9.

**Sol.** $35=\frac{3\times 3}{\times 3}=\frac{9}{15}$

**4(3).** Find the equivalent fraction 35 having denominator 30.

**Sol.** $35=\frac{3\times 6}{\times 6}=\frac{18}{30}$

**4(4).** Find the equivalent fraction 35 having numerator 27.

**Sol.** $35=\frac{3\times 9}{\times 9}=\frac{27}{45}$

**5(1).** Find the equivalent fraction$3648$ with numerator 9.

**Sol.** $3648=\frac{36\div 4}{48\div 4}=\frac{9}{12}$

**5(2).** Find the equivalent fraction 3648 with denominator 4.

**Sol.** $3648=\frac{36\div 12}{48\div 12}=\frac{3}{4}$

**6(1).** Check whether the given fractions are equivalent :$\frac{5}{9},\frac{30}{54}$

**Sol.** $\frac{5}{9}=\frac{30}{54}$
$5 \times 54 = 270$
$9 \times 30 = 270$
$\therefore 5 \times 54 = 9 \times 30$
$\therefore$ The given fractions $\frac{5}{9}$ and$\frac{30}{54}$ are equivalent.

**6(2).** Check whether the given fractions are equivalent: $\frac{3}{10},\frac{50}{120}$

**Sol.** $\frac{3}{10},\frac{50}{120}$
$3 \times 50 = 150$
$10 \times 12 = 120$
So, $150 \neq 120$
$\therefore$ The given fractions$\frac{3}{10}$ and $\frac{50}{120}$ are not equivalent.

**6(3).** Check whether the given fractions are equivalent :$\frac{7}{13},\frac{5}{11}$

**Sol.** 73,511
$7 \times 11 = 77$
$3 \times 5 = 15$
So, $77 \neq 15$
$\therefore$ The given fractions73 and511 are not equivalent.

**7(1).** Reduce the fraction to simplest from: 4860

**Sol.** Factors of 48 are 1, 2, 3, 4, ,6, 8, 12, 16, 24 and 48.
Factors of 60 are 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 and 60.
$\therefore$ Common factors of 48 and 60 are 1, 2, 3, 4, 6 and 12.
Highest of these common factors is 12.
$\therefore$ H.C.F. of 48 and 60 is 12
Now,4860=48÷1260÷12=45
Hence, the simplest form of4860 is45

**7(2).** Reduce the fraction to simplest from: 15060

**Sol.** Factors of 150 are 1, 2, 3, 5, 6, 10, 15, 25, 30, 50, 75 and 150
Factors of 60 are 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 and 60
$\therefore$ Common factors of 150 and 60 are 1, 2, 3, 5, 6, 10, 15 and 30.
Highest of these common factors is 30.
$\therefore$ H.C.F. of 150 and 60 is 30.
Now,15060=150÷3060÷30=52
Hence, the simplest form of 15060 is52

**7(3).** Reduce the fraction to simplest from: 8498

**Sol.** Factors of 84 are 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42 and 84
Factors of 98 are 1, 2, 7, 14, 49 and 98.
$\therefore$ Common factors of 84 and 98 are 1, 7 and 14.
Highest of these common factors is 14.
$\therefore$ H.C.F. of 84 and 98 is 14.
Now,8498=84÷1498÷14=67
Hence, the simplest form of 8498 is67

**7(4).** Reduce the fraction to simplest from: 1252

**Sol.** Factors of 12 are 1, 2, 3, 4, 6 and 12
Factors of 52 are 1, 2, 4, 13, 26 and 52.
$\therefore$ Common factors of 12 and 52 are 1, 2 and 4.
Highest of these common factors is 4.
$\therefore$ H.C.F. of 12 and 52 is 4.
Now,1252=12÷452÷4=313
Hence, the simplest form of 1252 is313

**7(5).** Reduce the fraction to simplest from: 728

**Sol.** Factors of 7 are 1 and 7
Factors of 28 are 1, 2, 4, 7, 14 and 28
∴ Common factors of 7 and 28 are 1 and 7
Highest of these common factors is 7
∴ H.C.F. of 7 and 28 is 7
Now, 728=7÷728÷7=14
Hence, the simplest form of728 is 14

**8.** Ramesh had 20 pencils, Sheelu had 50 pencils and Jammal had 80 pencils. After 4 months, Ramesh used up 10 pencils, sheelu used up 25 pencils and Jammal used up 40 pencils. What fraction did each use up?

**Sol.** For Ramesh
Number of pencils he had = 20
Number of pencils used by him = 10
∵ H.C.F. of 10 and 20 is 10
∴ Required fraction=1020=10÷1020÷10=12
For Sheelu
Number of pencils she had = 50
Number of pencils used by her = 25
∵ H.C.F. of 25 and 50 is 25
∴ Required fraction =2550=25÷2550÷25=12
For Jammal
Number of pencils he had = 80
Number of pencils used by him = 40
∵ H.C.F. of 40 and 80 is 40
∴ Required fraction= 4080=40÷4080÷40=12
Yes! each has up an equal fraction of their pencils.

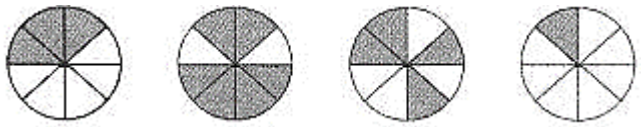
**9.** Match the equivalent fractions:

| | |
|---|---|
| (a) 250400 | i. 23 |
| (b) 180200 | ii. 25 |
| (c) 660990 | iii. 12 |
| (d) 180360 | iv. 58 |
| (e) 220550 | v. 910 |

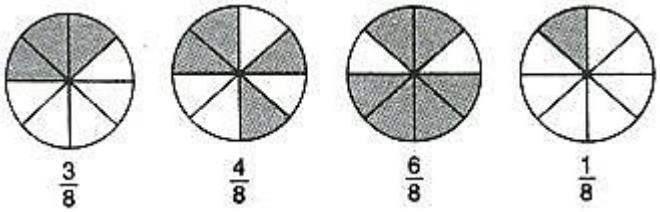
**Sol.** (a) - (iv), (b) - (v), (c) - (i), (d) - (iii), (e) - (ii)

# EX : 7.4

**1(1).** Write shaded portion as fraction. Arrange them in ascending and descending order correct sign '<', '=', '>' between the fractions.



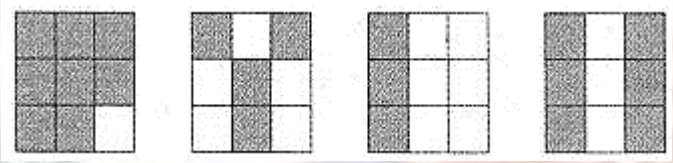
**Sol.**



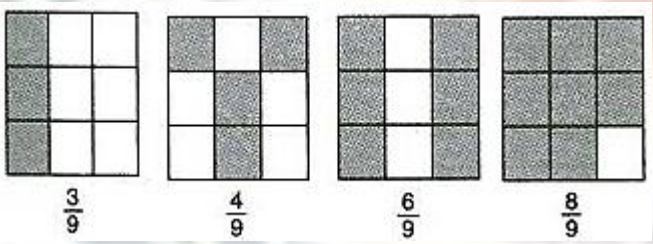

i. In ascending order, these are 18,38,48,68
i.e.,18<38<48<68

ii. In descending order, these are 68,48,38,18
i.e.,68>48>38>18

**1(2).** Write shaded portion as fraction. Arrange the following figure in ascending and descending order correct sign '<', '=', '>' between the fractions:



**Sol.**

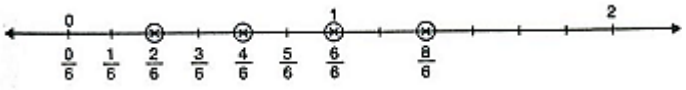



i. In ascending order, these are 39,49,69,89
i.e.,39<49<69<89

ii. In descending order, these are89,69,49,39
i.e.,89>69>49>39

**1(3).** Show 26,46,86 and66 on the number line. Put appropriate signs between the fractions given.
56□26,36□0,16□66,86□56

**Sol.**




56>26,36>06,16<66,86>56

**2(1).** Compare the fraction and put an appropriate sign.
36□56

**Sol.** Here denominators of the two fractions are the same and $3 < 5$.
Therefore, $36<56$

**2(2).** Compare the fraction and put an appropriate sign.
17□14

**Sol.** Here, numerators of the two fractions are the same and $7 > 4$.
$\therefore 17<14$

**2(3).** Compare the fraction and put an appropriate sign.
45□55

**Sol.** Here, denominators of the fractions are same and $4 < 5$.
Therefore, $45<55$

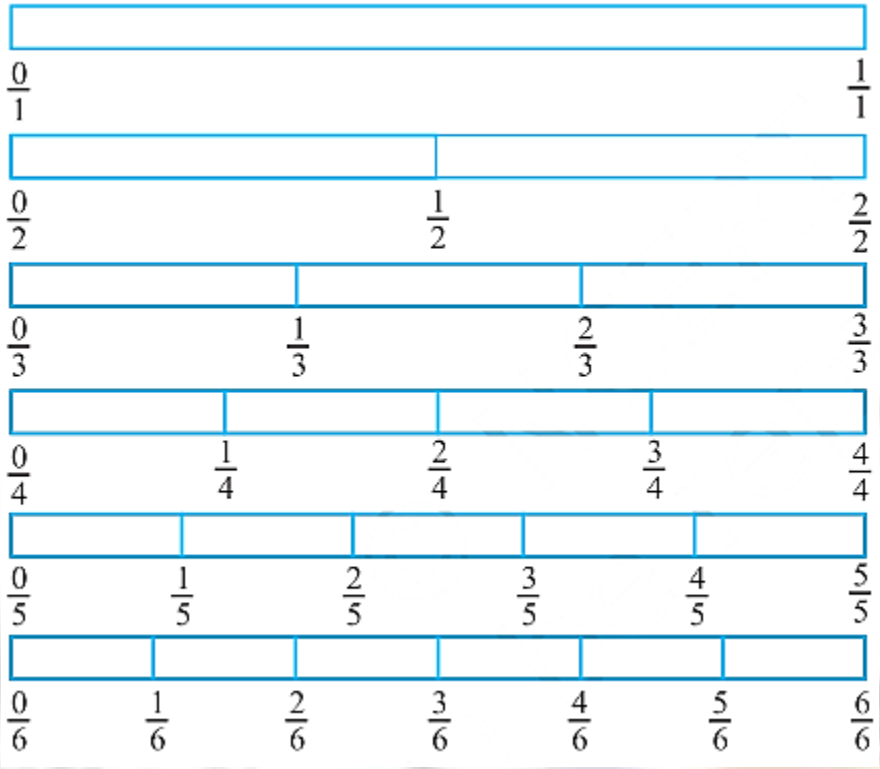
**2(4).** Compare the fraction and put an appropriate sign.
35□37

**Sol.** Here, numerators of the two fractions are the same and $5 < 7$.
$\therefore 35>37$

**3.** Make five more such pairs and make appropriate signs.

**Sol.** First Pair47−−67;47<67
Second Pair59−−09;59>09
Third Pair 711−−911;711<911
Fourth Pair1115−−1315;1115<1315
Fifth Pair1120−−920;1120>920

**4.** Look at the figures and write '<' or '>', '=' between the given pairs of fractions.




a. 16□13
b. 34□26
c. 23□24
d. 66□33
e. 56□55

Make five more such problems and solve them with your friends.

**Sol.**

a. In this part of the question, we have,
The numerator of both the fractions are equal
Hence, fraction having lesser denominator will be greater
Therefore,
16<13

b. In this question, first of all, we have to make the same denominator of both the fractions:
3×34×3=912
Also,
2×26×2=412
Now, the denominators of both the fractions are equal
Hence, fraction having greater numerator will be greater
As, 9 > 4
Therefore,
34>26

c. In this part of the question, we have,

The numerator of both the fractions are equal
Therefore, fraction having lesser denominator will be greater
Therefore,
23>24

d. In this part of the question, we have,
66= 1
Also,
33= 1
Therefore,
1 = 1
Hence,
66=33

e. In this part of the question, we have,
The numerator of both the fractions are equal
Hence, fraction having lesser denominator will be greater
Therefore,
56<55

**5(1).** How quickly can you do this? Fill the appropriate sign. ('<', '=', '>')
12□15

**Sol.** Here, we have,
The numerator of both the fractions are equal.
Hence, fraction having lesser denominator will be greater
Therefore,
12>15

**5(2).** How quickly can you do this? Fill the appropriate sign. ('<', '=', '>')
24□36

**Sol.** Here, we have
24=12
Also,
36=12
As, 12=12
Therefore,
24=36

**5(3).** How quickly can you do this? Fill the appropriate sign. ('<', '=', '>')
35□23

**Sol.** Here, first of all, we have to make the same denominator of both the fractions:
3×35×3=915
Also,
2×53×5=1015
Now, the denominators of both the fractions are equal
Hence, fraction having greater numerator will be greater

As, 9 < 10
Therefore,
35<23

**5(4).** How quickly can you do this? Fill the appropriate sign. ('<', '=', '>')
34□28

**Sol.** Here, we have,
28=14
Now, the denominators of both the fractions are equal
Hence, fraction having greater numerator will be greater
Therefore,
34>14

**5(5).** How quickly can you do this? Fill the appropriate sign. ('<', '=', '>')
35□65

**Sol.** Here, we have,
Denominators of both the fractions are equal
Hence, fraction having greater numerator will be greater
Therefore,
35<65

**5(6).** How quickly can you do this? Fill the appropriate sign. ('<', '=', '>')
79□39

**Sol.** Here, we have,
Denominators of both the fractions are equal
Hence, fraction having greater numerator will be greater
Therefore,
79>39

**5(7).** How quickly can you do this? Fill the appropriate sign. ('<', '=', '>')
14□28

**Sol.** Here, we have,
28 is 14 in reduced form.
Therefore,
14=28

**5(8).** How quickly can you do this? Fill the appropriate sign. ('<', '=', '>')
610□45

**Sol.** Here, we have,
610=35
Now, the denominators of both the fractions are equal
Hence, fraction having greater numerator will be greater

As, 3 < 4
Therefore,
610<45

**5(9).** How quickly can you do this? Fill the appropriate sign. ('<', '=', '>')
34□78

**Sol.** Here, firstly we have to make same denominators
3×24×2=68
Now, the denominators of both the fractions are equal
Hence, fraction having greater numerator will be greater
As, 6 < 7
Therefore,
34<78

**5(10).** How quickly can you do this? Fill the appropriate sign. ('<', '=', '>')
610□35

**Sol.** Here, we have,
610=35
Now, the denominators of both the fractions are equal
Hence, fraction having greater numerator will be greater
Therefore,
610<45

**5(11).** How quickly can you do this? Fill the appropriate sign. ('<', '=', '>')
57□1521

**Sol.** Here, we have
1521=57
As, 57=57
Therefore,
57=1521

**6.** The following fractions represent just three different numbers. Separate them into three groups of equivalent fractions, by changing each one to its simplest form.

a. 212
b. 315
c. 850
d. 16100
e. 1060
f. 1575
g. 1260
h. 1696
i. 1275
j. 1272
k. 318

l. 425

**Sol.**

a. In this question, we have,
212=1×26×2=16
b. In this question, we have,
315=1×35×3=15
c. In this question, we have,
850=4×225×2=425
d. In this question, we have,
16100=4×425×4=425
e. In this question, we have,
1060=1×106×10=16
f. In this question, we have,
1575=1×155×15=15
g. In this question, we have,
1260=1×125×12=15
h. In this question, we have,
1696=1×166×16=16
i. In this question, we have,
1275=4×325×3=425
j. In this question, we have,
1272=1×126×12=16
k. In this question, we have,
318=1×36×3=16
l. In this question, we have,
425

From above, we see that, there are three groups of equivalent fractions:
16 = (a), (e), (h), (j) and (k)
15 = (b), (f) and (g)
425 = (c), (d), (i) and (l)

**7(1).** Find. Write and indicate how you solved this. Is59equal to45?

**Sol.** Equivalent fractions of 59 are 1018,1527,2036,2545,.....
Equivalent fractions of 45 are810,1215,1620,2025,2430,2835,3240,3645.....
∵ 25 is not equal to 36
∴ 59 is not equal to45.

**7(2).** Find. Write and indicate how you solved this. Is 916 equal to59?

**Sol.** Equivalent fractions of 916 are 916,1832,2748,3664,4580,5496,63112,72128,81144.....
Equivalent fractions of 59
are 1018,1527,2036,2545,3054,3563,4072,4581,5090,5599,60108,65117,70126,75135,80144.....
∵ 81 is not equal to 80

∴ 916 is not equal to59

**7(3).** Find. Write and indicate how you solved this. Is45 equal1620?

**Sol.** Equivalent fractions of45 are 810,1215,1620,.....
Clearly, 45 is equal to 1620.

**7(4).** Find. Write and indicate how you solved this. Is115 equal to 430?

**Sol.** Equivalent fractions of 115 are 230,345,460,.....
∵ $4 \neq 8$
∴ 115 is not equal to430

**8.** Ila read 25 pages of a book containing 100 pages. Lalita read 25 of the same book. Who read less?

**Sol.** Here, we have,
Number of pages read by Lalita = 25×100
= 2×20 = 40
Also,
Number of pages read by Ila = 25
Hence, Ila has read less number of pages.

**9.** Rafiq exercised for 36 of an hour, while Rohit exercised for 34 of an hour. Who exerecised for longer time?

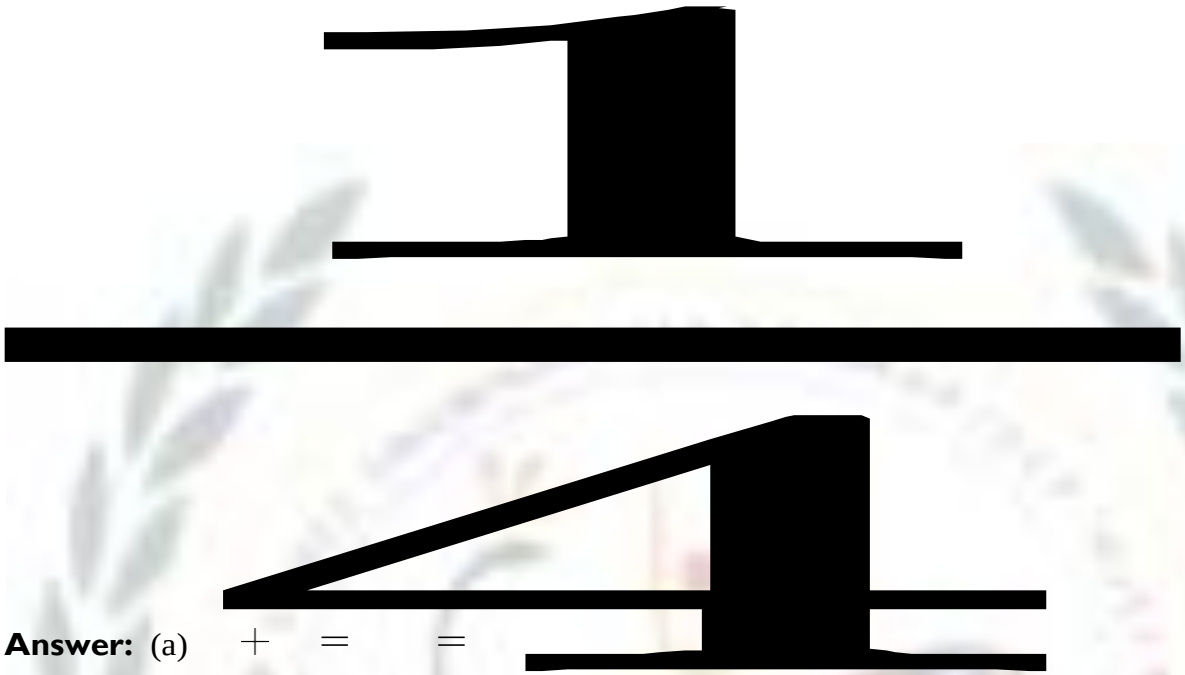
**Sol.** ∵ 34>36
∴ Rohit exercised for a longer time.

**10.** In a class A of 25 students, 20 passed with 60% or more marks; in another class B of 30 students, 24 passed with 60% or more marks. In which class was a greater fraction of students getting with 60% or more marks?

**Sol.** 2025=20÷525÷5=45
2430=24÷630÷6=45
Hence, in both the class the same fraction 45 of total students got first class.

# EX: 7.5

**Question 1.** Write the fractions appropriately as additions or subtractions



**Answer:** (a) $+ \quad = \quad =$

(b) $\frac{5}{5} - \frac{3}{5} = \frac{5-3}{5} = \frac{2}{5}$

(c) $\frac{2}{6} + \frac{3}{6} = \frac{2+3}{6} = \frac{5}{6}$

**Question 2.** Solve:

(a) $\frac{1}{18} + \frac{1}{18}$

(b) $\frac{8}{15} + \frac{3}{15}$

(c) $\frac{7}{7} - \frac{5}{7}$

(d) $\frac{1}{22} + \frac{21}{22}$

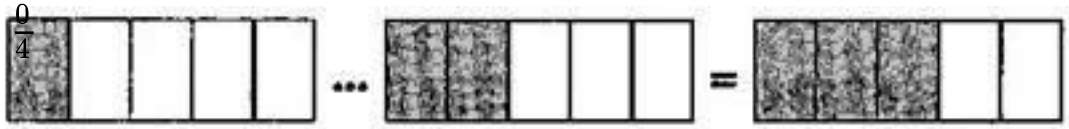
(e) $\frac{12}{15} - \frac{7}{15}$

(f) $\frac{5}{8} + \frac{3}{8}$

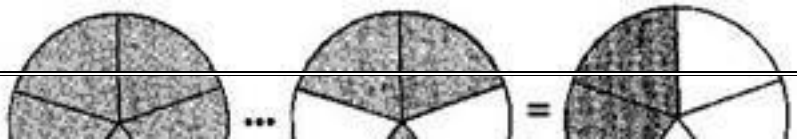
(g) $1 - \frac{2}{3}\left(1 = \frac{3}{3}\right)$

(h) $+ \quad \frac{0}{4}$

(a)



(b)



(i) $3 - \frac{12}{5}$

**Answer:** (a) $\frac{1}{18} + \frac{1}{18} = \frac{1+1}{18} = \frac{2}{18} = \frac{1}{9}$

(b) $\frac{8}{15} + \frac{3}{15} = \frac{8+3}{15} = \frac{11}{15}$

(c) $\frac{7}{7} - \frac{5}{7} = \frac{7-5}{7} = \frac{2}{7}$

(d) $\frac{1}{22} + \frac{21}{22} = \frac{1+21}{22} = \frac{22}{22} = 1$

(e) $\frac{12}{15} - \frac{7}{15} = \frac{12-7}{15} = \frac{5}{15} = \frac{1}{3}$

(f) $\frac{5}{8} + \frac{3}{8} = \frac{8}{8} = 1$

(g) $1 - \frac{2}{3} = \frac{3}{3} - \frac{2}{3} = \frac{3-2}{2} = \frac{1}{3}$

(h) $\frac{1}{4} + \frac{0}{4} = \frac{1+0}{4} = \frac{1}{4}$

(i) $3 - \frac{12}{5} = \frac{15}{5} - \frac{12}{5} = \frac{15-12}{5} = \frac{3}{5}$

**Question 3.** Shubham painted $\frac{2}{3}$ of the wall space in his room. His sister Madhavi helped and painted $\frac{1}{3}$ of the wall space. How much did they paint together?

**Answer:** Fraction of the wall painted by Shubham = $\frac{2}{3}$

Fraction of the wall painted by Madhavi = $\frac{1}{3}$

Total painting done by both of them = $\frac{2}{3} + \frac{1}{3} = \frac{2+1}{3} = \frac{3}{3} = 1$

Therefore, they painted the wall completely.

**Question 4.** Fill in the missing fractions: (a) $\frac{7}{10} - \square = \frac{3}{10}$

(b) $\square - \frac{3}{21} = \frac{5}{21}$

(c) $\square - \frac{3}{6} = \frac{3}{6}$

(d) $\square + \frac{5}{27} = \frac{12}{27}$

$\frac{4}{10}$

$\frac{8}{21}$

**Answer:** (a)

(b)

(c)

(d) $\frac{7}{27}$

**Question** 5.Javed was given a basket of 7 oranges, He sold only 5 oranges. What fraction of oranges was left in the basket?

**Answer:** Total = 1

Fraction of Orange left = $1 - \frac{5}{7}$

= $\frac{7}{7} - \frac{5}{7} = \frac{7-5}{7} = \frac{2}{7}$

Thus, $\frac{2}{7}$ an orange was left in the basket.

## Ex. 7.6

**Question 1.** Solve:

(a) $\frac{2}{3} + \frac{1}{7}$

(b) $\frac{3}{10} + \frac{7}{15}$

(c) $\frac{4}{9} + \frac{2}{7}$

(d) $\frac{5}{7} + \frac{1}{3}$

(e) $\frac{2}{5} + \frac{1}{6}$

(f) $\frac{4}{5} + \frac{2}{3}$

(g) $\frac{3}{4} - \frac{1}{3}$

(h) $\frac{5}{6} - \frac{1}{3}$

(i) $\frac{2}{3} + \frac{3}{4} + \frac{1}{2}$

(j) $\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$

(k) $1\frac{1}{3} + 3\frac{2}{3}$

(l) $4\frac{2}{3} + 3\frac{1}{4}$

(m) $\frac{16}{5} - \frac{7}{5}$

(n) $\frac{4}{3} - \frac{1}{2}$

**Answer:** (a) L.C.M. of 3 and 7 is 21

$\therefore \frac{2}{3} + \frac{1}{7} = \frac{2\times7+1\times3}{21} = \frac{14+3}{21} = \frac{17}{21}$

(b) L.C.M. of 10 and 15 is 30

$\therefore \frac{3}{10} + \frac{7}{15} = \frac{3\times3+7\times2}{30} = \frac{9+14}{30} = \frac{23}{30}$

(c) L.C.M. of 9 and 7 is 63

$\therefore \frac{4}{9} + \frac{2}{7} = \frac{4\times7+2\times9}{63} = \frac{28+18}{63} = \frac{46}{63}$

(d) L.C.M. of 7 and 3 is 21

$\therefore \frac{5}{7}+\frac{1}{3}=\frac{5\times3+7\times1}{21}=\frac{15+7}{21}=\frac{22}{21}=1\frac{1}{21}$

(e) L.C.M. of 5 and 6 is 30

$\therefore \frac{2}{5}+\frac{1}{6}=\frac{2\times6+5\times1}{30}=\frac{12+5}{30}=\frac{17}{30}$

(f) L.C.M. of 5 and 3 is 15

$\therefore \frac{4}{5}+\frac{2}{3}=\frac{4\times3+2\times5}{15}=\frac{12+10}{15}=\frac{22}{15}=1\frac{7}{15}$

(g) L.C.M. of 4 and 3 is 12

$\therefore \frac{3}{4}-\frac{1}{3}=\frac{3\times3-4\times1}{12}=\frac{9-4}{12}=\frac{5}{12}$

(h) L.C.M. of 6 and 3 is 6

$\therefore \frac{5}{6}-\frac{1}{3}=\frac{5\times1-2\times1}{6}=\frac{5-2}{6}=\frac{3}{6}=\frac{1}{2}$

(i) L.C.M. of 3, 4 and 2 is 12

$\therefore \frac{2}{3}+\frac{3}{4}+\frac{1}{2}=\frac{2\times4+3\times3+1\times6}{12}=\frac{6+9+6}{12}=\frac{23}{12}=1\frac{11}{12}$

(j) L.C.M. of 2, 3, and 6 is 6

$\therefore \frac{1}{2}+\frac{1}{3}+\frac{1}{6}=\frac{1\times3+1\times2+1\times1}{6}=\frac{3+2+1}{6}=\frac{6}{6}=1$

(k) L.C.M. of 3 and 3 is 3

$\therefore \frac{4}{3}+\frac{11}{3}=\frac{4+11}{3}=\frac{15}{3}=5$

(l) L.C.M. of 3 and 4 is 12

$\therefore \frac{14}{3}+\frac{13}{4}=\frac{14\times4+13\times3}{12}=\frac{56+39}{12}=\frac{95}{12}=7\frac{11}{12}$

(m) L.C.M. of 5 and 5 is 5

$\therefore \frac{16}{5}-\frac{7}{5}=\frac{16-7}{5}=\frac{9}{5}=1\frac{4}{5}$

(n) L.C.M. of 3 and 2 is 6

$\therefore \frac{5}{8} - \frac{1}{5} = \frac{\square}{\square} = \frac{1}{2} = \frac{5+2}{10}$

**Question 2.** Sarika bought $\frac{2}{5}$ meter of ribbon and Lalita $\frac{3}{4}$ meter of ribbon. What is the total length of the ribbon they bought?

**Answer:** Ribbon bought by Sarita $\frac{2}{5}$ m and Ribbon bought by Lalita $\frac{3}{4}$ m

Total length of the ribbon $= \frac{2}{5} + \frac{3}{4} = \frac{2\times4+5\times3}{20}$ [$\because$ L.C.M. of 5 and 4 is 20]

$= \frac{8+15}{20} = \frac{23}{20} = 1\frac{3}{20}$ m

Therefore, they bought $1\frac{3}{20}$ m of ribbon.

**Question 3.** Naina was given $1\frac{1}{2}$ piece of cake and Najma was give $1\frac{1}{3}$ piece of cake. Find the total amount of cake given to both of them.

**Answer:** Cake taken by Naina = $1\frac{1}{2}$ piece and Cake taken by Najma = $1\frac{1}{3}$ piece

Total cake taken $= 1\frac{1}{2} + 1\frac{1}{3} = \frac{3}{2} + \frac{4}{3} = \frac{3\times3+4\times2}{6}$ [$\because$ L.C.M. of 2 and 3 is 6]

$= \frac{9+8}{6} = \frac{17}{6} = 2\frac{5}{6}$

Therefore total consumption of cake is $2\frac{5}{6}$

**Question 4.** Fill in the boxes:

(a) $\frac{1}{2} - \frac{\square}{\square} = \frac{4\times2-1\times3}{6}$

(b) $\square - \frac{\square}{\square} = \frac{8-3}{6}$

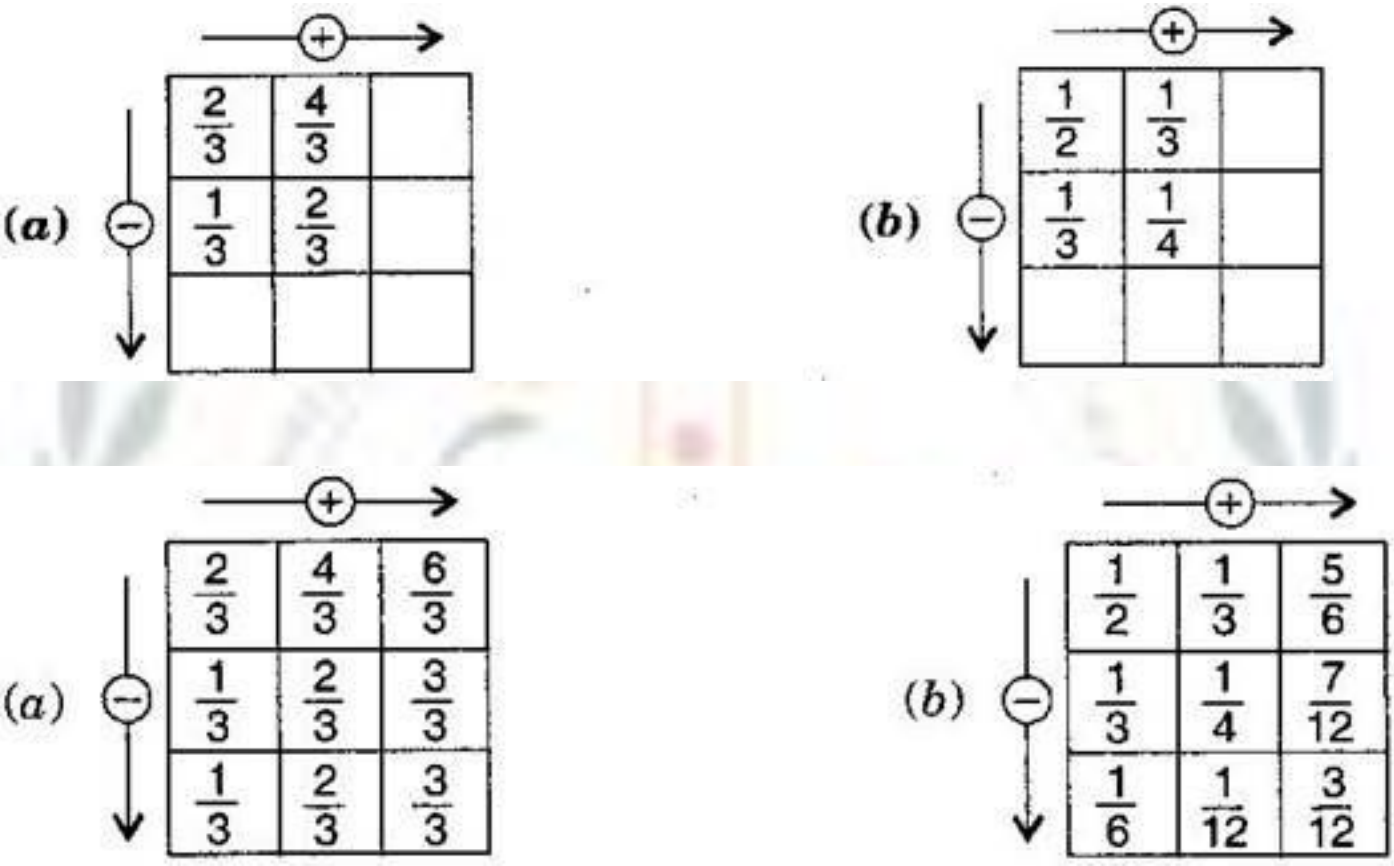
(c) $\frac{1}{2} - \square = \frac{1}{6}$

**Answer:** (a) $\frac{\square}{\square} + \frac{5}{8} = \frac{2+5}{8} = \frac{7}{8}$

(b) $\square - \frac{\square}{\square} = \square = \frac{7}{10}$

(c) $\frac{1}{2} - \frac{1}{6} = \frac{3-1}{6} = \frac{2}{6}$

**Question 5.** Complete the addition – subtraction box:




## Answer:

**Question6.** A piece of wire $\frac{7}{8}$ meter long broke into two pieces. One piece was $\frac{1}{4}$ meter long. How long is the other piece?

**Answer:** Total length of wire $\frac{7}{8}$

Length of first part = $\frac{1}{4}$ meter

Remaining part = $\frac{7}{8} - \frac{1}{4} = \frac{7\times1-2\times1}{8}$ [∵ L.C.M. of 8 and 4 is 8]

$= \frac{7-2}{8} = \frac{5}{8}$ meter

Therefore, the length of remaining part is $\frac{5}{8}$ meter.

**Question 7.** *Nan*dini house is $\frac{9}{10}$ km from her school. She walked some distance and then took a bus for ½ km to reach the school. How far did she walk?

**Answer:** Total distance between the school and house = $\frac{9}{10}$ km

Distance covered by bus = $\frac{1}{2}$ km

Remaining distance = $\frac{9}{10} - \frac{1}{2} = \frac{9\times1-1\times5}{10}$ [∵ L.C.M. of 10 and 2 is 10]

= $\frac{9-5}{10} = \frac{4}{10} = \frac{2}{5}$ km

Therefore, distance covered by walking us $\frac{2}{5}$ km.

**Question 8.** Asha and Samuel have bookshelves of the same size partly filled with books. Asha $\frac{5}{6}th$'s shelf is full and Samuel's $\frac{2}{5}th$ shelf is 2/5$^{th}$'S full. Whose bookshelf is more filled and by what fraction?

**Answer:** $\frac{5}{6}$ and $\frac{2}{5}$

$\Rightarrow \frac{5}{6}\times\frac{5}{5} = \frac{25}{30}$ and $\frac{2}{5}\times\frac{6}{6} = \frac{12}{30}$ [∵ L.C.M. of 6 and 5 is 30]

$\because \frac{25}{30} > \frac{12}{30} \Rightarrow \frac{5}{6} > \frac{2}{5}$

∴ Asha's bookshelf is more covered than Samueal.

Difference = $\frac{25}{30} - \frac{12}{30} = \frac{13}{30}$

**Question 9.** Jaidev takes $2\frac{1}{5}$ minutes to walk across the school ground. Rahul takes $\frac{7}{4}$ minutes to do the same. Who takes less time and by what fraction?

**Answer:** Time taken by Jaidev = $2\frac{1}{5}$ minutes = $\frac{11}{5}$

Time taken by Rahul = $\frac{7}{4}$ minutes

Difference = $\frac{11}{5} - \frac{7}{4} = \frac{11\times4-7\times5}{20}$ [∵ L.C.M. of 5 and 4 is 20]

$= \frac{44-35}{20} = \frac{9}{20}$ minutes

Thus, Rahul takes less time, which is $\frac{9}{20}$ minutes.

# Notes
# CHAPTER – 8
# Decimals

- **To understand the parts of one whole (i.e. a unit) we represent a unit by a block. One block divided into 10 equal parts means each part is 110 (one-tenth) of a unit. It can be written as 0.1 in decimal notation. The dot represents the decimal point and it comes between the units place and the tenths place.**
- **Every fraction with denominator 10 can be written in decimal notation and vice-versa.**
- **One block divided into 100 equal parts means each part is 110 (one-hundredth) of a unit. It can be written as 0.01 in decimal notation.**
- **Every fraction with denominator 100 can be written in decimal notation and vice-versa.**
- **In the place value table, as we go from left to the right, the multiplying factor becomes $\frac{1}{10}$ of the previous factor.**
- **Fractions as Decimals: Fractions can be converted into decimals by writing them in the form with denominators 10, 100 and so on. Example: 710=0.7**
- **Decimals as Fractions: Decimals can be converted into fractions by removing their decimal points and writing 10, 100, etc. in the denominators, depending upon the number of decimal places in the decimals. Examples: 0.9 = 910**
- **Addition of Decimals: Decimals can be added by writing them with equal number of decimals places. Example: add 0.005, 6.5 snd 20.04.**
  **Solution: Convert the given decimals as 0.005, 6.500 and 20.040.**
  **0.005 + 6.500 + 20.040 = 26.545**
- **Subtraction of Decimals: Decimals can be subtracted by writing them with equal number of decimal places.**
  **Example: Subtract the given decimals as 5.674 and 12.500**
  **12.500 – 5.674 = 6.826**
- **Comparing Decimals: Decimals numbers can be compared using the idea of place value:**
  **Example: 45.32 or 35.69**
  **The given decimals have distinct whole number part, so we compare whole number part only.**
  **The whole number part of 45.32 is greater than 35.69. Therefore, 45.32>35.69.**
- **Using Decimals: Many daily life problems can be solved by converting different units of measurements such as money, length, weight, etc. in the decimal form.**
- **Money:**
  **100 paise = 1 Rupee**
  **1 paise = 1/100 Rupee = 0.01 Rs.**
  **5 paise = 5/100 Rs. = 0.05 Rs.**
  **105 paise = 1 Rs. + 5 paise = 1.05 Rs.**
  **7 Rs. 8 paise = 7 Rs. + 0.08 Rs = 7.08 Rs.**
  **7 Rs. 80 paise = 7 Rs. + 0.80 Rs. = 7.80 Rs.**
- **Length:**
  **10 mm = 1 cm**
  **1mm = 1/10 cm = 0.1 cm**
  **100 cm = 1 m**

**1 cm = 1/100 m = 0.01 m**
**1000 m = 1 km**
**1 m = 1/1000 km = 0.001 km**

- **Weight:**
  **1000 g = 1 kg**
  **1 g = 1/1000 kg = 0.001 kg**
  **25 g = 25/1000 kg = 0.025 kg**

**CLASS-6** **Chapter 8 Decimals** **SUB-MATHS**

## Ex. 8.1

**Question 1.** Write the following as numbers in the given table:

**Question2.** Writethefollowingdecimalsintheplacevaluetable:

(a)19.4

(b) 0.3

(c) 10.6

(d)

205.9

**Answer:** (a)

(b)

(c)

(d)

**Question 3.** Write each of the following as decimals:

(a) seven-tenths

(b) Two tens andnine-tenths

(c) Fourteen pointsix

(d) One hundred andtwo-ones

(e) Six hundred pointeight

**Answer:** (a) seven-tenths = 7tenths= =0.7

(b) 2 tens and 9-tenths = 2 x10+ = 20 + 0.9=20.9

(c) Fourteen point six =14.6

(d) Onehundredand2-ones=100+2x1=100+2=102

(e) Sixhundredpointeight=600.8

**Question4.**Writeeachofthefollowingasdecimals:

(a)

(b) $3+$

(c) $200 + 60 + 5 +$

(d) $70+$

(e)

(f)

$\frac{3}{2}$

(g)

(h) $\frac{2}{5}$

(i)

(j)

(k)

(f) Two tens andnine-tenths

(g) Fourteen pointsix

(h) One hundred andtwo-ones

(i) Six hundred pointeight

**Answer:** (a) seven-tenths = 7tenths= =0.7

(b) 2 tens and 9-tenths = 2 x10+ = 20 + 0.9=20.9

(c) $200 + 60 + 5 +$ = 200 + 60 + 5 + 0.1 =265.1

(d) $70+$ = 70 + 0.8 =70.8

(e) = = $+8+$ =8 + 0.8 =8.8

(f) = $4+$ = 4 + 0.2 =4.2

(g) $\frac{3}{2}$ = = = = $+$ = 1 + 0.5 =1.5

(h) $\frac{2}{5}$ = = =0.4

(i) = = = = $+$ = 2 + 0.4 =2.4

(j) = $3+3\frac{3}{5}3+$ = 3 + 0.6 =3.6

(k) = $4+4\frac{1}{2}4+$ = 4 + 0.5 =4.5

**Question 5.** Write the following decimals as fraction. Reduce the fractions to lowest terms:

(a)0.6

(b)2.5

(c)1.0

(d) 3.8

(e) 13.7

(f) 21.2

(g) 6.4

**Answer:** (a) 0.6 = 6/10 = 3/5

(b) 2.5 = 25/10 = 5/2

(c)1.0= =1

(d) 3.8 = =

(e) 13.7 =

(f) $21.2 =$ =

(g) 6.4 = =

**Question 6.** Express the following as cm using decimals:

(a) 2mm

(b) 30mm

(c) 116mm

(d) 4 cm 2mm

(e) 162mm

(f) 83mm

**Answer:**(a) ∵ 10mm=1cm

∴ 1mm= cm

∴ 2mm= x 2 = 0.2cm

(b) ∵ 10 mm = 1cm

1mm=cm

∴

∴ 30mm= x 30 = 3.0cm

(c) ∵ 10 mm = 1cm

1mm= cm

∴ 116mm= x 116 = 11.6cm

(d) 4cm+ cm [∵ 10 mm = 1 cm]

4 + 0.2 = 4.2cm

(e) ∵ 10 mm = 1cm

∴ 1mm= cm

∴ 162mm= x 162 = 16.2cm

(f) ∵ 10 mm = 1cm

∴ 1mm= cm

∴ 83mm= x 83 = 8.3cm

**Question7.**Betweenwhichtwowholenumbersonthenumberlinearethegiven numberslie?Whichofthesewholenumbersisnearertothegivennumber?

(a)0.8

(b)5.1

(c)2.6

(d)6.4

(e)9.1

(f) 4.9

**Answer:** (a) From 0 to 1, 0.8 is nearest to 1.

(b) From5to6,5.1isnearestto5.

(c) From2to3,2.6isnearestto3.

(d) From6to7,6.4isnearestto6.

(e) From9to10,9.1isnearestto9.

(f) From4to5,4.9isnearestto5.

**Question 8.** Show the following numbers on the number line:

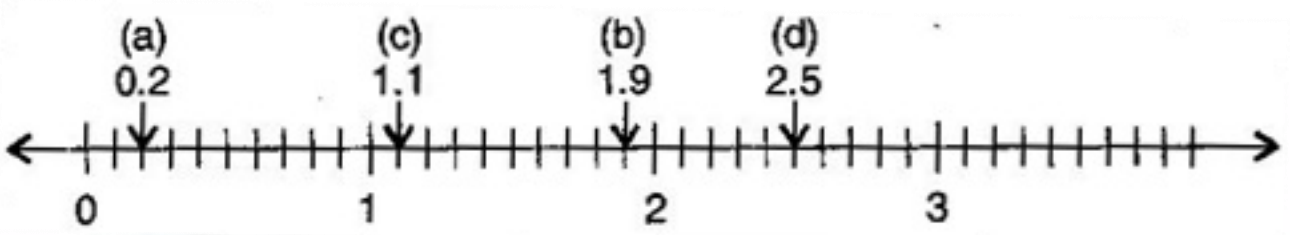
(a)0.2

(b)1.9

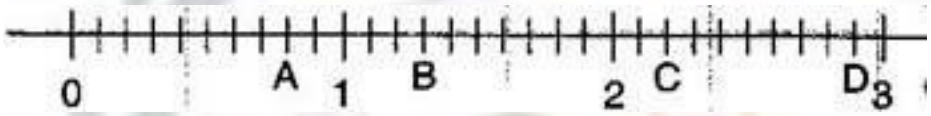
(c)1.1

(d)2.5

**Answer:**




**Question 9.** Write the decimal number represented by the points A, B, C, D:




**Answer:** A =0+ = 0.8

B =1+ =1.3

C =2+ =2.2

D =2+ =2.9

**Question 10.** (a) The length of Ramesh's notebook is 9 cm and 5 mm. What will be its length in cm?

(b) The length of a young gram plant is 65 mm. Express its length in cm.

**Answer:** (a) 9 cm 5 mm = 9 cm + 5 mm = 9 + = 9.5 cm

(b) 65 mm = cm = 6.5 cm

## Ex. 8.2

**Question 1.** Complete the table with the help of these boxes and use decimals to write the number:

## Answer:

(C) 1 2 9 1.29

**Question 2.** Write the numbers given in the following place value table in decimal form:

**Answer:**(a)$0x100+0x10+3x1+2x$ $+5x$ $+0x\frac{1}{1000}$

$= 0 + 0 + 3 + 0.2 + 0.05 + 0 = 3.25$

(b)$1x100+0x10+2x1+6x$ $+3x$ $+0x\frac{1}{1000}$

$= 100 + 0 + 2 + 0.6 + 0.03 + 0 = 102.63$

(c)$0x100+3x10+0x1+0x$ $+2x$ $+5x\frac{1}{1000}$

$= 0 + 30 + 0 + 0 + 0.02 + 0.005 = 30.025$

(d)$2x100+1x10+1x1+9x$ $+0x$ $+2x\frac{1}{1000}$

$= 200 + 10 + 1 + 0.9 + 0 + 0.002 = 211.902$

(e)$0x100+1x10+2x1+2x$ $+4x$ $+1x\frac{1}{1000}$

0 + 10 + 2 + 0.2 + 0.04 + 0.001 = 12.241

**Question3.** Write the following decimals in the place value table:

(a) 0.29

(b) 2.08

(c) 19.60

(d) 148.32

(e) 200.812

**Answer:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (e) | 200.812 | 2 | 0 | 0 | 8 | 1 | 2 |

**Question4.** Write each of the following as decimals:

(a) $20+9++$

(b) $+137$

(c) $++\ \frac{4}{1000}$

(d) $23++\ \frac{6}{1000}$

(e) $700+20+5+$

**Answer:** (a) 20 + 9 + 0.4 + 0.01 = 29.41

(b) 137 + 0.05 = 137.05

(c) 0.7 + 0.06 + 0.004 =0.764

(d) 23 + 0.2 + 0.006 =23.206

(e) 700 + 20 + 5 + 0.09 = 725.09

**Question5.**Writeeachofthefollowingdecimalsinwords:

(a)0.03

(b)1.20

(c) 108.56

(d)10.07

(e)0.032
(f) 5.008

**Answer:** (a) Zero point zero three

(b) One point twozero

(c) Onehundredandeightpointfivesix

(d) Ten point zeroseven

(e) Zeropointzerothreetwo

Fivepointzerozeroeight

**Question6.**Betweenwhichtwonumbersintenthsplaceonthenumberlinedoeseachofthe given numberlie?

(a)0.06

(b)0.45

(c)0.19

(d)0.66

(e)0.92

(f) 0.57

**Answer:** All the numbers lie between 0 and 1.

(a) 0.06isnearerto0.1.

(b) 0.45isnearerto0.5.

(c) 0.19 is nearer to0.2.

(d) 0.66isnearerto0.7.

(e) 0.92isnearerto0.9.

(f) 0.57 is nearer to0.6.

**Question7.**Writeasfractionsinlowestterms:

(a)0.60

(b)0.05

(c)0.75

(d)0.18

(e)0.25

(f) 0.125

(g) 0.066

**Answer:** (a) 0.60 = $= \frac{3}{5}$

(b) 0.05= $=$

(c) 0.75= $=$ $\frac{3}{4}$

(d) 0.18= $=$

(e) 0.25= $= \frac{1}{4}$

(f) 0.125 = $= \frac{1}{8}$

(g) 0.066 = $=$

## Ex. 8.3

**Question 1.** Which is greater:

(a) 0.3 or 0.4

(b) 0.07 or 0.02

(c) 3 or 0.8 (d) 0.5

or0.05 (e) 1.23 or1.2

(f) 0.099 or 0.19

(g) 1.5 or 1.50

(h) 1.431 or 1.490

(i) 3.3 or 3.300

(j) 5.64 or 5.603

**Answer:** Before comparing, we write both terms in like decimals: (a) 0.3 <

0.4

(b) 0.07 > 0.02

(c) 3.0or0.8 $\Rightarrow$ 3.0 >0.8

(d) 0.50or0.05 $\Rightarrow$ 0.50>0.05

(e) 1.23or1.20 $\Rightarrow$ 1.23 >1.20

(f) 0.099or0.190 $\Rightarrow$ 0.099 <0.190

(g) 1.50or1.50 $\Rightarrow$ 1.50 =1.50

(h) 1.431 < 1.490

(i) 3.300or3.300 $\Rightarrow$ 3.300=3.300

(j) 5.640or5.603 $\Rightarrow$ 5.640>5.603

**Question2.** Makefivemoreexamplesandfindthegreater:

(a) 1.8 or1.82

(b) 1.0009 or1.09

(c)10.01or100.1

(d) 5.100 or 5.0100

(e) 04.213 or 0421.3

**Answer:** Before comparing, we write both the terms in like decimals

(i) 1.80or1.82$\Rightarrow$ 1.82 is greater than1.8

(ii)1.0009or1.0900⇒ 1.09 is greater than1.0009

(iii) 10.01or100.10⇒ 100.1 is greater than 10.01

(iv)5.1000or5.0100⇒ 5.100isgreaterthan5.0100

(v)04.213or0421.300⇒ 0421.3isgreaterthan04.213

# Ex. 8.4

**Question 1.** Express as rupees using decimals:

(a) 5paise

(b) 75paise

(c) 20paise

(d) 50 rupees 90paise

(e) 725paise

**Answer:**(a) ∵ 1 paisa =Rs.

∴ 5paise= x5=Rs.0.05

(b) ∵ 1 paisa =Rs.

∴ 75paise= x5=Rs.0.75

(c) ∵ 1 paisa =Rs.

∴ 20paise= x5=Rs.0.05

(d) ∵ 1 paisa =Rs.

∴ Rs.50+90paise=50+ x90=Rs.50.90

(e) ∵ 1 paisa =Rs.

∴ 725paise= x725 = = Rs.7.25

**Question 2.** Express as meters using decimals:

(a) 15cm

(b) 6cm

(c) 2 m 45cm

(d) 9 m 7cm

(e) 419cm

**Answer:** (a) ∵ 1cm= m

∴ 15cm= x15=0.15m

(b) ∵ 1cm= m

∴ 6cm= x6=0.06m

(c) ∵ 1cm= m

∴ 2m45cm=2+ x45=2.45m

(d) ∵ 1cm= m

∴ 9m7cm=9+ x7=9.07m

(e) ∵ 1cm= m

∴ 419cm= x419= = 4.19m

**Question 3.** Express as cm using decimals:

(a) 5mm

(b) 60mm

(c) 164mm

(d) 9 cm 8mm

(e) 93mm

**Answer:**(a) ∵ 1mm= cm

∴ 5mm= x5=0.5cm

(b) ∵ 1mm= cm

∴ 60mm= x60=6cm

(c) ∵ 1mm= cm

∴ 164mm= x164=16.4cm

(d) ∵ 1mm= cm

∴ 9cm8mm=9+ x8=9+0.8=9.8cm

(e) ∵ 1mm= cm

∴ 93mm= x93=9.3cm

**Question 4.** Express as km using decimals:

(a) 8m

(b) 88m

(c) 8888 m

(d) 70 km 5 m

**Answer:** (a) ∵ 1m= $\frac{1}{1000}$ km

∴ 8m= $\frac{1}{1000}$ x8=0.008km

(b) ∵ 1m= $\frac{1}{1000}$ km

∴ 88m= $\frac{1}{1000}$ x88=0.088km

(c) ∵ 1m= $\frac{1}{1000}$ km

∴ 8888m= $\frac{1}{1000}$ x8888=8.888km

(d) ∵ 1m= $\frac{1}{1000}$ km

∴ 70km5m=70+ $\frac{1}{1000}$ x5=70.005km

**Question 5.** Express as kg using decimals:

(a) 2g

(b) 100g

(c) 3750 g

(d) 5 kg 8g

(e) 26 kg 50g

**Answer:** (a) ∵ 1g= $\frac{1}{1000}$ kg

∴ 2g= $\frac{1}{1000}$ x2=0.002kg

(b) ∵ 1g= $\frac{1}{1000}$ kg

∴ 100g= $\frac{1}{1000}$ x100=0.1kg

(c) ∵ 1g= $\frac{1}{1000}$ kg

∴ 3750g= $\frac{1}{1000}$ x3750=3.750kg ∴ 5kg8g=5+ $\frac{1}{1000}$ x8=5.008kg

(d) ∵ 1g= $\frac{1}{1000}$ kg

∴ 5kg8g=5+ $\frac{1}{1000}$ x8=5.008kg

(e) ∵ 1g= $\frac{1}{1000}$ kg

∴ 26kg50g=26+ $\frac{1}{1000}$ x50=26.050kg

## Ex. 8.5

**Question 1.** Find the sum in each of the following:

(a) 0.007 + 8.5 + 30.08

(b) 15 + 0.632 + 13.8

(c) 27.076 + 0.55 + 0.004

(d) 25.65 + 9.005 + 3.7

(e) 0.75 + 10.425 + 2

(f) 280.69 + 25.2 + 38

**Answer:**(a)38.58

7 (b)29.432

(c)27.630

(d)38.355

(e)13.175

(f) 343.89

**Question2.** RashidspentRs.35.75forMathsbookandRs.32.60forSciencebook.Findthe total amount spent byRashid.

**Answer:** MoneyspentforMathsbook=Rs.35.75

MoneyspentforSciencebook=Rs.32.60

Totalmoneyspent=Rs.35.75+Rs.32.60=Rs.68.35 Therefore, total money spent by Rashid is Rs.68.35

**Question3.** Radhika'smothergaveherRs.10.50andherfathergaveherRs.15.80.Findthe totalamountgiventoRadhikabyherparents.

**Answer:** Moneygivenbyhermother=Rs.10.50

Moneygivenbyherfather=Rs.15.80

TotalmoneyreceivedbyRadha=Rs.10.50+Rs.15.80=Rs.26.30

Therefore,totalmoneyreceivedbyRadhaisRs.26.30.

**Question4.** Nasreenbought3m20cmclothforhershirtand2m5cmclothforhertrouser. Findthetotallengthofclothboughtbyher.

**Answer:** Clothboughtforshirt=3m20cm=3.20m

Clothboughtfortrouser=2m5cm=2.05m

TotallengthofclothboughtbyNasreen=3.20m+2.05m=5.25m

Therefore,totallengthofclothboughtbyNasreenis5.25m

**Question5.** Nareshwalked2km35minthemorningand1km7mintheevening.How muchdistancedidhewalkinall?

**Answer:** Distancetravelledinthemorning=2km35m=2.035km

Distancetravelledintheevening=1km7m=1.007km

Totaldistancetravelled=2.035km+1.007km=3.042km

Therefore,totaldistancetravelledbyNareshis3.042km.

**Question6.**Sunitatravelled15km268mbybus,7km7mbycarand500monfootinorder toreachherschool.Howfarisherschoolfromherresidence?

**Answer:**Distancetravelledbybus=15km268m=15.268km Distance

travelled by car=7km7m=7.007km

Distance travelled on foot = 500 m = 0.500 km

Total distance travelled=15.268m+7.007m+0.500m=22.775km

There fore, total distancetravelledbySunitais22.775km.

**Question7.**Ravipurchases5kg400grice,2kg20gsugarand10kg850gflour.Findthe total weight of his purchases.

**Answer:** Weight of Rice = 5kg 400g = 5.400kg

Weight of Sugar = 2kg 20g = 2.020kg

Weight of Flour = 10 kg 850 g = 10.850 kg

Total weight=5.400kg+2.020kg+10.850kg=18.270kg

There fore total weight of Ravi's purchase=18.270kg.

## Ex. 8.6

**Question l.** Subtract: (a) 18.25 from 20.75

(b) 202.54 m from 250 m

(c) 5.36 from 8.40

(d) 2.051 km from 5.206 km

(e) 0.314 kg from 2.107 kg

**Answer:** (a) Rs. 2.50

(b) 47.46 m

(c) Rs. 3.04

(d) 3.155 km

(e) 1.793 kg

**Question 2.** Find the value of:

(a) 9.756 – 6.28

(b) 21.05 – 15.27

(c) 18.5 – 6.79

(d) 11.6 – 9.847

**Answer:** (a) 3.476

(b) 5.78

(c) 11.71

(d) 1.753

**Question 3.** Raju bought a book of Rs. 35.65. He gave Rs. 50 to the shopkeeper. How much money did he

get back from theshopkeeper?

**Answer:** Total amount given to the shopkeeper = Rs. 50

Cost of book = Rs. 35.65

Amount left = Rs. 50.00 = Rs. 35.65 = Rs. 14.35 Therefore,

Raju got back Rs. 14.35 from the shopkeeper.

**Question4.**RanihadRs.18.50.SheboughtoneIce-creamforRs.11.75.Howmuchmoney does she havenow?

**Answer:** Total money = Rs. 18.50

Cost of Ice-cream = Rs. 11.75

Amountleft=Rs.18.50–Rs.11.75=Rs.6.75 Therefore,

Rani has Rs. 6.75now.

**Question5.**Tinahad20m5cmlongcloth.Shecuts4m50cmlengthofclothfromthisfor makingacurtain.Howmuchclothisleftwithher?

**Answer:** Total length of the cloth = 20 m 5 cm = 20.05 m

Length of the cloth used = 4 m 50 cm = 4.50 m Remaining

cloth = 20.05 m – 4.50 m = 15.55 m Thereofre, 15.55 m of

cloth is left with Tina.

**Question6.**Namitatravels20km50meveryday.Outofthisshetravels10km200mbybus andtherestbyauto.Howmuchdistancedoesshetravelbyauto?

**Answer:** Total distance to travel everyday = 20 km 50 m = 20.050 km

Distance travelled by bus = 10 km 200 m = 10.200 km

Distance travelled by auto = 20.050 km – 10.200 km = 9.850 km

Therefore, 9.850 km distance is travelled by auto everyday.

**Question7.**Aakashboughtvegetablesweighing10kg.Outofthis3kg500ginonions,2kg 75gistomatoesandtherestispotatoes.Whatistheweightofthepotatoes?

**Answer:** Weight of onions = 3 kg 500 g = 3.500 kg

Weight of tomatoes = 2 kg 75 g = 2.075 kg

Total weight of onions and tomatoes = 3.500kg + 2.075 kg = 5.575kg

Therefore, weight of potatoes = 10.000 kg – 5.575 kg= 4.425 kg Thus,

weight of potatoes is 4.425kg.

**XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX**