NCERT Solutions Class 6 Maths (Ganita Prakash)

Chapter 7 Fractions

Figure it Out (Page No. 152 – 153)

Fill in the blanks with fractions.

Question 1. Three guavas together weigh 1 kg. If they are roughly of the same size, each guava will roughly weigh ____kg.

Solution: 13

Question 2. A wholesale merchant packed 1 kg of rice in four packets of equal weight. The weight of each packet is _____ kg.

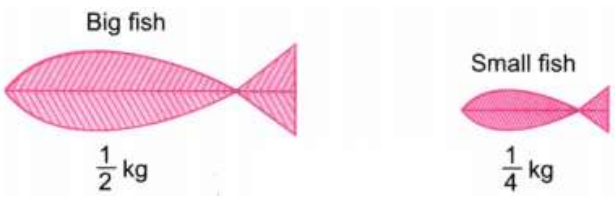
Solution: 14

Question 3. Four friends ordered 3 glasses of sugarcane juice and shared it equally. Each one drank _____ glass of sugarcane juice.

Solution: 34
As total quantity is 3 which is to be divided into four equal parts. So, the required fraction is 34.

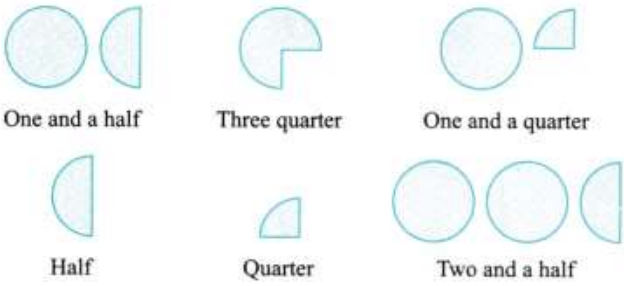
Question 4. The bis fish weighs 12 kg. The small one weighs 14 kg. Together they weigh ____ kg.

Solution:



Given the weighs of big fish = 12kg and the weighs of small fish = 14kg
Total weight of both fish = 12+14=2+14 kg
= 34 kg

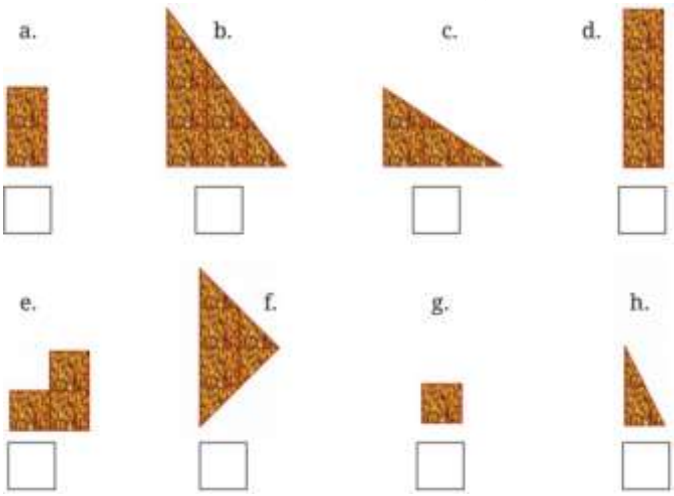
Question 5. Arrange these fraction words in order of size from the smallest to the biggest in the empty box below: One and a half, three quarters, one and a quarter, half, quarter, two and a half.
Solution:



∴ The fractions from smallest to the biggest are as follows: quarter, half, three quarters one and a quarter, one and a half, two and a half.

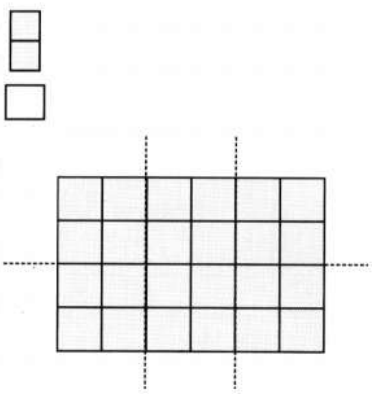
Figure it Out (Page No. 155)

Question 1. The figure below shows different fractional units of a whole chikki. How much of a whole chikki is each piece?



Solution:

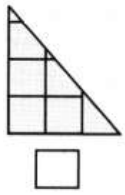
(a)

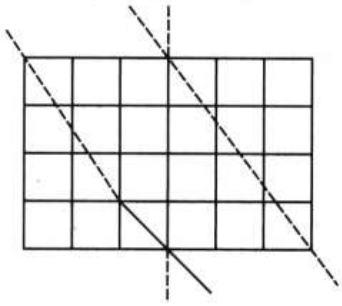


Total no. of pieces formed of given size = 12

Required fraction = 112

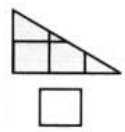
(b)

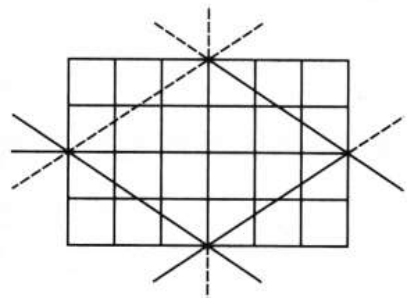




Total no. of pieces formed of given size = 4
Required fraction = 14

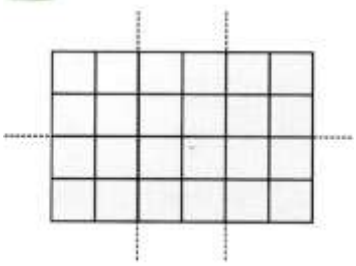
(c)





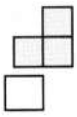
Total no. of pieces formed of given size = 8
Required fraction = 18

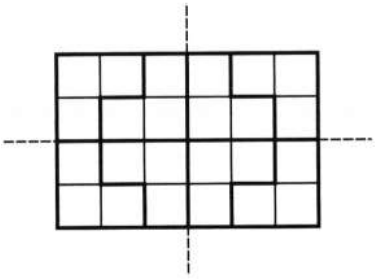
(d)



Total no. of pieces formed of given size = 6
Required fraction = 16

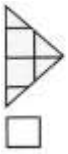
(e)

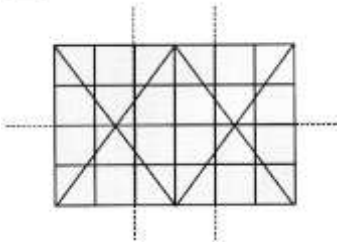




Total no. of pieces formed of given size = 8
Required fraction = 18

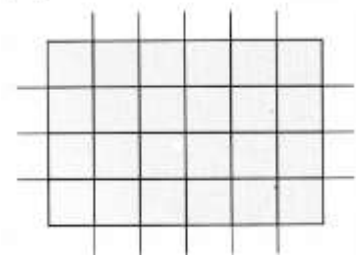
(f)





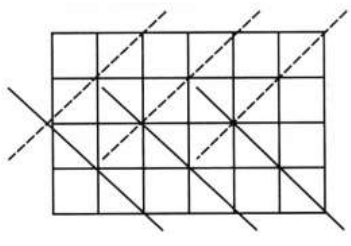
Total no. of pieces formed of given size = 8
Required fraction = 18

(g)



Total no. of pieces formed of given size = 24
Required fraction = 124

(h)

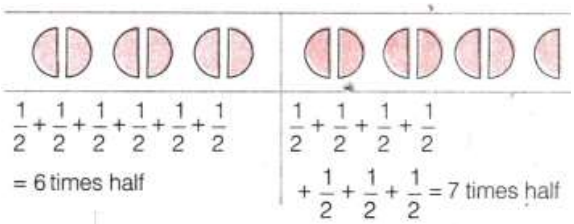


Total no. of pieces formed of given size = 12
Required fraction = 112

Figure it Out (Page No. 158)

Question 1. Continue this table of 12 for 2 more steps.

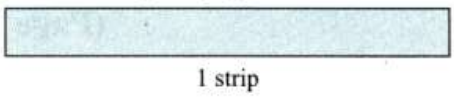
Solution:



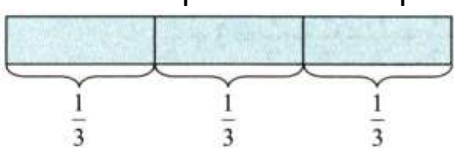
Question 2. Can you create a similar table for 14 ?
Solution: Yes.

Question 3. Make 13 using a paper strip. Can you use this to also make 16?

Solution: Take a strip of paper.

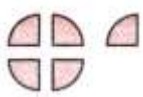


Fold the strip into three equal parts and then open up.



Yes, we can also make 16 using a paper strip by folding 6 again the above strip.

Question 4. Draw a picture and write an addition statement as above to show:
(a) 5 times 14 of a roti
Solution:



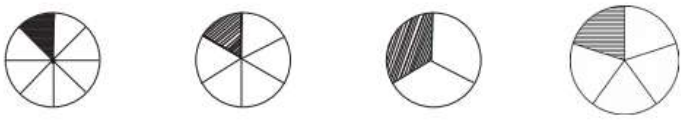
5 times 14 of a roti
= 14+14+14+14+14

(b) 9 times 14 of a roti
Solution:

9 times 14 of a roti
= 14+14+14+14+14+14+14+14+14

Question 5. Match each fractional unit with the correct picture:

$\frac{1}{3}$ $\frac{1}{5}$ $\frac{1}{8}$ $\frac{1}{6}$



Solution:

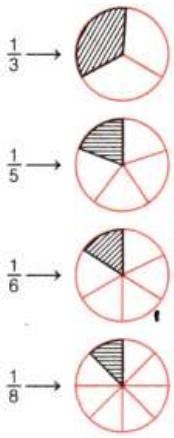
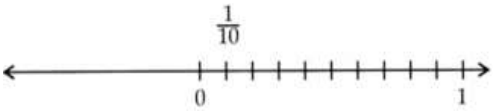


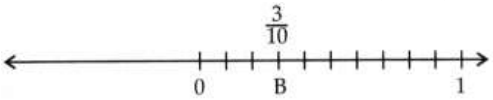
Figure it Out (Page No. 160)

Question 1. On a number line, draw lines of length 110, 310, and 45.

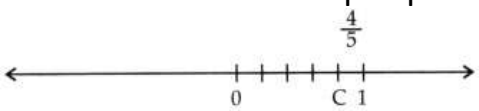
Solution:



Divide the unit into 10 equal parts and point A represents 110.



Divide a unit into 10 equal parts and point B represents 310.



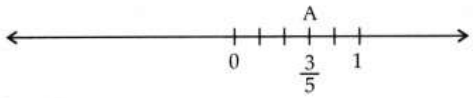
Divide a unit into 5 equal parts and point C represents 45.

Question 2. Write five more fractions of your choice and mark them on the number line.

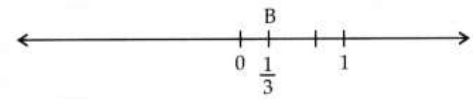
Solution: The fractions are 35,13,57,25 and 18.

Their number line representations are:

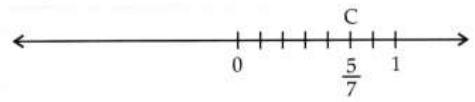
(a) $\frac{3}{5}$



(b) $\frac{1}{3}$

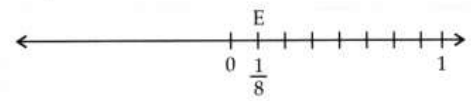


(c) $\frac{5}{7}$



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

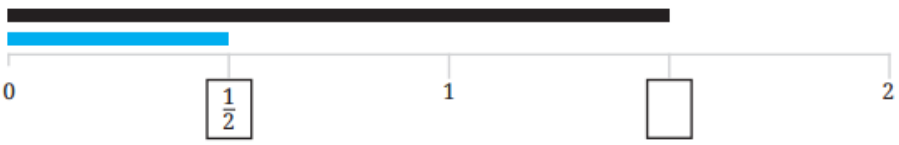
(e) $\frac{1}{8}$



Question 3. How many fractions lie between 0 and 1? Think, discuss with your classmates, and write your answer.

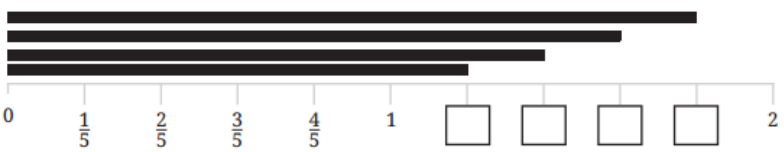
Solution: There are an infinite number of fractions between 0 and 1.
Example: 35,45,71012 etc.

Question 4. What is the length of the pink line and black line shown below? The distance between 0 and 1 is 1 unit long, and it is divided into two equal parts. The length of each part is 12. So the pink line is y units long. Write the fraction that gives the length of the black line in the box.

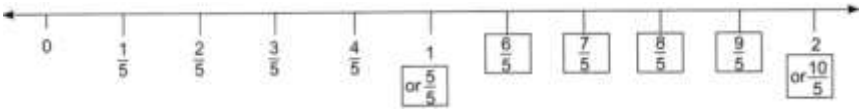


Solution: Length of black line is 12;
Length of black line is 12 + 12 + 12
Fraction that gives length of black line = 32

Question 5. Write the fraction that gives the lengths of the black lines in the respective boxes.

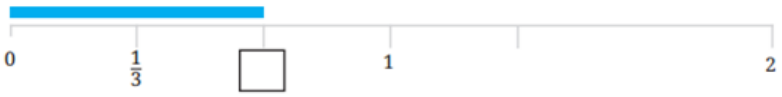


Solution:



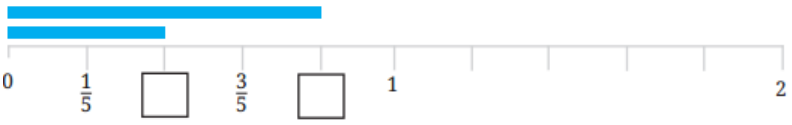
Intext Questions

Question 1. Here, the fractional unit is dividing a length of 1 unit into three equal parts. Write the fraction that gives the length of the pink line in the box or in your notebook. (Page 159)



Solution: Here number line OR is divided into three equal parts OP, PQ and QR.
Hence length of pink line = OP + PQ = 13+13=23

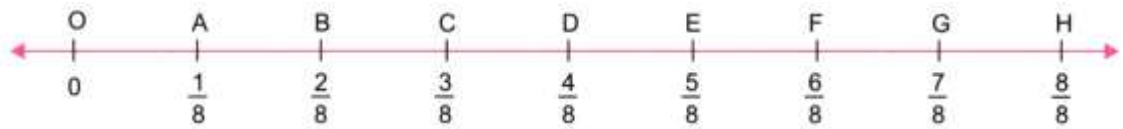
Question 2. Here, a unit is divided into 5 equal parts. Write the fraction that gives the length of the pink lines in the respective boxes or in your notebook.



Solution: Here number line OT = 1 unit is divided into five equal parts OP, PQ, QR, RS and ST.
Hence length of pink line OQ = OP + PQ = 15+15=25
Now, length of pink line OS = OP + PQ + QR + RS = 15+15+15+15=45
Hence, OQ = 25 OS = 45

Question 3. Now, a unit is divided into 8 equal parts. Write the appropriate fractions in your notebook Solution:Here number line OH is divided into 8 equal parts OA, AB, BC, CD, DE, EF, FG and GH.

Solution:



Also, OA = 18, OB = 28, OC = 38, OH = 88 = 1

Figure it Out (Page No. 162)

Question 1.
How many whole units are there in 72?

Solution: 72=12+12+12+12+12+12+12=3+12
So, there are 3 whole units in 72.

Question 2. How many whole units are there in 43 and in 73?

Solution: 43=13+13+13+13=1+13
So, there are 1 whole unit in 43.
73=13+13+13+13+13+13+13=2+13
So, there are 2 whole units in 73.

Figure it Out (Page No. 162)

Question 1. Figure out the number of whole units in each of the following fractions:
(a) 83
(b) 115
(c) 94

Solution: (a) 2, (b) 2, (c) 2

Question 2. Can all fractions greater than 1 be written as such mixed numbers?

Solution: Yes.

Question 3. Write the following fractions as mixed fractions (e.g. 92 = 412)
(a) 92
Solution: = 412

(b) 95
Solution: = 145

(c) 2119
Solution: = 1219

(d) 479
Solution: = 529

(e) 1211
Solution: = 1111

(f) 196
Solution: = 316

Figure it Out (Page No. 163)

Question 1. Write the following mixed numbers as fractions:
(a) 314
(b) 723

(c) 949
(d) 316
(e) 2311
(f) 3910
Solution:

(a) $3\frac{1}{4} = \frac{(3\times4+1)}{4} = \frac{13}{4}$

(b) $7\frac{2}{3} = \frac{(7\times3+2)}{3} = \frac{23}{3}$

(c) $9\frac{4}{9} = \frac{(9\times9+4)}{9} = \frac{85}{9}$

(d) $3\frac{1}{6} = \frac{(3\times6+1)}{6} = \frac{19}{6}$

(e) $2\frac{3}{11} = \frac{(2\times11+3)}{11} = \frac{25}{11}$

(f) $3\frac{9}{10} = \frac{(3\times10+9)}{10} = \frac{39}{10}$

Fraction Figure it Out (Page No. 165)

Question 1. Are 36,48,510 equivalent fractions? Why?

Solution: Here, simplest form of 36=3÷36÷3=12 [HCF of 3 and 6 is 3]
and simplest form of 48 is 4÷48÷4=12 [HCF of 4 and 8 is 4]
and simplest form of 510 is 5÷510÷5=12 [HCF of 5 and 10 is 5]
Hence, 36,48,510 are equivalent fractions.

Question 2. Write two equivalent fractions for 26.

Solution: From the fractional wall we can choose any two fractions that denote the same length as 26·26=13=39

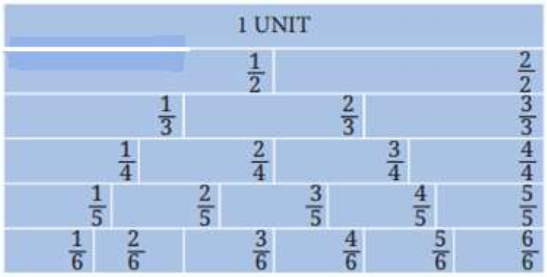
Question 3. 46 = _____ = _____ = _____ = _____
(Write as many as you can)

Solution: Here,

$$\frac{4}{6} = \boxed{\frac{4\times2}{6\times2}} = \boxed{\frac{4\times3}{6\times3}} = \boxed{\frac{4\times4}{6\times4}}$$
$$= \frac{8}{12} = \frac{12}{18} = \frac{16}{24}$$

Intext Questions

Answer the following questions after looking at the fraction wall: [Page 164]



Question 1. Are the lengths 12 and 36 equal?

Solution: Yes, here lengths 12 and 36 = 12
Lengths are equal.

Question 2. Are 23 and 46 equivalent fractions? Why?

Solution: Yes, lengths 23 and 46 = 13 are equivalent fraction, as they have same length.

Question 3. How many pieces of length 16 will make a length of 12?

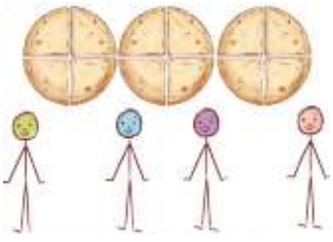
Solution: Total no.of pieces = 1216=12×61=62 = 3
Hence three pieces of length 16 will make a length of 12

Question 4. How many pieces of length 16 will make a length of 13?

Solution: Total no. of pieces = 1316=13×61=63 = 2
Hence two pieces of length 16 will make a length of 13.

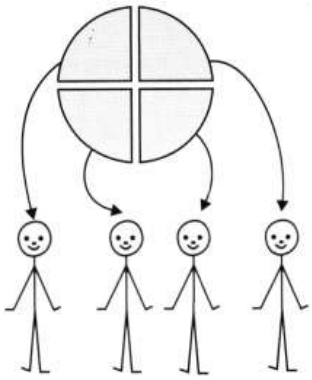
Figure it Out (Page No. 166)

Question 1. Three rotis are shared equally by four children, show the division in the picture and write a fraction of how much each child gets. Also, write the corresponding division facts, addition facts, and, multiplication facts.



The fraction of roti each child gets is _____
Division fact:
Addition fact:
Multiplication fact:
Compare your picture and answer with your classmates!

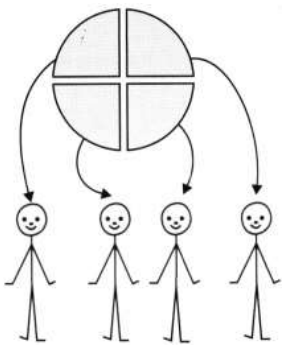
Solution: One roti is shared as shown in the figure below:



The four shares must be equal to each other!
Similar distribution will be done for the second and third roti also.
So, each child will get 34 a piece of roti.
The division fact is 3 ÷ 4 = 34
The addition fact is 3 = 34+34+34+34
The multiplication fact is 3 = 4 × 34

Question 2. Draw a picture to show how much each child gets when 2 rotis are shared equally by 4 children. Also, write the corresponding division facts, addition facts, and multiplication facts.

Solution: One roti is shared as shown in the figure below:



The four shares must be equal to each other!
A similar distribution will be done for the second roti also.
So, each child will get 14 part from a rod.
So, the total fraction of roti received by each child from 2 rotis = 24 = 12
The division fact is 2 ÷ 4 = 24
The addition fact is = 24+24+24+24
The multiplication fact is 2 = 4 × 24

Question 3. Anil was in a group where 2 cakes were divided equally among 5 children. How much cake would Anil get?

Solution: Anil would get 25 part of the cake.

Figure it Out (Page No. 168 – 169)

Question 1. Find the missing numbers:
(a) 5 glasses of juice shared equally among 4 friends is the same as _____ glasses of juice shared equally among 8 friends. So, 54 = ?8.
(b) 4 kg of potatoes divided equally in 3 bags is the same as 12 kgs of potatoes divided equally in _____ bags. So, 43 = 12?.
(c) 7 rods divided among 5 children is the same as rods divided among children. So, 75 = _____

Solution: (a) Here, the amount of juice each friend gets when 5 glasses are shared among 4 friends = number of glasses number of friends =54
Now to determine how many glasses of juice would be needed to give each of the 8 friends the same amount = 8 × 54
= 10 glasses
So, 10 glasses of juice shared equally among 8 friends is the same as 5 glasses of juice shared equally among 4 friends.
∴ 54=108

(b) Here 4 kg of potatoes divided equally in 3 bags then amount of potatoes per bag
= 4 kg3 bags =43 kg per bag
Let x is the number of bags for 12 kg of potatoes, where each bag has the same amount of potatoes then
12 kgx bags =43 kg per bag
⇒ 12 × 3 = 4 × x
⇒ 36 = 4x
⇒ x = 364
⇒ x = 9
∴ 43=129

(c) Dividing 7 rotis among 4 children gives 7 each child = 75 of a roti. We can find an equivalent fraction by multiplying both the numerator and the denominator by the same number. For example, multiplying both by 2.
7×25×2=1410
So, 7 rotis divided among 5 children is the same as 14 rotis divided among 10 children
∴ 75=1410

Intext Questions

Question 1. Find equivalent fractions for the given pairs of fractions such that the fractional units are the same. (Page 172)
(a) 72 and 35

Solution: Given fractions are 72 and 35

Here, the denominators are 2 and 5.
And least common multiple of 2 and 5 is 10.
Hence for both fractions let's have same denominator of 10.
Now for 72 multiply both the numerator and the denominator by 5.
$72=7\times52\times5=3510$
And for 35 multiply both the numerator and the denominator by 2, we get,
$3\times25\times2=610$
Hence, the equivalent fractions with the same denominator are:
3510 and 610

(b) 83 and 56

Solution: Given fractions are 83 and 56
Here, the denominators are 3 and 6.
And least common multiple of 3 and 6 is 6.
Now for 83 multiply both the numerator and the denominator by 2.
$83=8\times23\times2=166$
56 already have a denominator 6.
Hence, the equivalent fractions with the same denominator are:
166 and 56

(c) 34 and 35

Solution: Given fractions are 34 and 35
Here, the denominators are 4 and 5.
And least common multiple of 4 and 5 is 20.
Now for 34 multiply both the numerator and the denominator by 5.
$34=3\times54\times5=1520$
And for 35 multiply both the numerator and the denominator by 4, we get
$35=3\times45\times4=1220$
So, the equivalent fractions with the same denominator are:
1520 and 1220

(d) 67 and 85

Solution: Given fractions are 67 and 85
Here, the denominators are 7 and 5.
And least common multiple of 7 and 5 is 35.
Now for 67 multiply both the numerator and the denominator by 5.
$67=6\times57\times5=3035$
And for 85 multiply both the numerator and the denominator by 7, we get
$85=8\times75\times7=5635$
So, the equivalent fractions with the same denominator are:
3035 and 5635

(e) 94 and 52

Solution: Given fractions are 94 and 52
Here, the denominators are 4 and 2.
And least common multiple of 4 and 2 is 4.
Now for 52 multiply both the numerator and the denominator by 2.
$52=5\times22\times2=104$
and 94 already have a denominator 4
So, the equivalent fractions with the same denominator are:
94 and 104

(f) 110 and 29

Solution: Given fractions are and 110 and 29
Here, the denominators are 10 and 9.
And least common multiple of 10 and 9 is 90.
Now for 110 multiply both the numerator and the denominator by 9.
$110=1\times910\times9=990$
And for 2 multiply both the numerator and the denominator by 10, we get
$29=2\times109\times10=2090$
So, the equivalent fractions with the same denominator are:'
990 and 2090

(g) 83 and 114

Solution: Given fractions are 83 and 114
Here, the denominators are 3 and 4.
And least common multiple of 3 and 4 is 12.
Now for 83 multiply both the numerator and the denominator by 4.
$83=8\times43\times4=3212$
And for 114 multiply both the numerator and the denominator by 3, we get
$114=11\times34\times3=3312$
So, the equivalent fractions with the same denominator are:
3212 and 3312

(h) 136 and 19

Solution: Given fractions are 136 and 19
Here, the denominators are 6 and 9.
And least common multiple of 6 and 9 is 18.
Now for 136 multiply both the numerator and the denominator by 3.
$136=13\times36\times3=3918$
And for 19 multiply both the numerator and the denominator by 2, we get
$19=1\times29\times2=218$

So, the equivalent fractions with the same denominator are:
3918 and 218

Figure it Out (Page No. 173)

Question 1. Express the following fractions in lowest terms:

(a) 1751
Solution: 13

(b) 64144
Solution: 49

(c) 126147
Solution: 67

(d) 525112
Solution: 7516

Figure it Out (Page No. 174)

Question 1. Compare the following fractions and justify your answers:
(a) 83,52
(b) 49,37
(c) 710,914
(d) 125,85
(e) 94,52
Solution:

(a) Given fractions are $\frac{8}{3}$ and $\frac{5}{2}$

LCM of 3 and 2 is 6

$\frac{8}{3} = \frac{8}{3}\times\frac{2}{2} = \frac{16}{6}$ and $\frac{5}{2} = \frac{5}{2}\times\frac{3}{3} = \frac{15}{6}$

Clearly, $\frac{16}{6} > \frac{15}{6}$ So, $\frac{8}{3} > \frac{5}{2}$

(b) Given, fractions are $\frac{4}{9}$ and $\frac{3}{7}$

LCM of 9 and 7 is 63.

$\frac{4}{9} = \frac{4}{9}\times\frac{7}{7} = \frac{28}{63}$

$\frac{3}{7} = \frac{3}{7}\times\frac{9}{9} = \frac{27}{63}$

Clearly, $\frac{28}{63} > \frac{27}{63}$ So, $\frac{4}{9} > \frac{3}{7}$

(c) Given fractions are $\frac{7}{10}$ and $\frac{9}{14}$

LCM of 10 and 14 is 70.

$\frac{7}{10} = \frac{7}{10}\times\frac{7}{7} = \frac{49}{70}$

$\frac{9}{14} = \frac{9}{14}\times\frac{5}{5} = \frac{45}{70}$

Clearly, $\frac{49}{70} > \frac{45}{70}$ So, $\frac{7}{10} > \frac{9}{14}$

(d) Given fractions are $\frac{12}{5}$ and $\frac{8}{5}$

Clearly $\frac{12}{5} > \frac{8}{5}$

As denominators are same, so $\frac{12}{5} > \frac{8}{5}$

(e) Given, fractions are $\frac{9}{4}, \frac{5}{2}$

LCM of 4 and 2 is 4

$\frac{9}{4}\times\frac{1}{1} = \frac{9}{4}$

$\frac{5}{2}\times\frac{2}{2} = \frac{10}{4}$

Clearly $\frac{9}{4} < \frac{10}{4}$ So, $\frac{9}{4} < \frac{5}{2}$

Question 2. Write following fractions ascending order.
(a) 710,1115,25

Solution: The given fractions are 710,1115,25
Let us find LCM of denominator 10, 15, 5

2	10,	15	5
3	5	15	5
5	5	5	5
	1	1	1

∴ LCM of 10, 15 and 5 = 2 × 3 × 5 = 30
Now let us make denominator of each fractions as LCM

$$\frac{7\times3}{10\times3}, \frac{11\times2}{15\times2}, \frac{2\times6}{5\times6}$$

$$\frac{21}{30}, \frac{22}{30}, \frac{12}{30}$$

$$\text{Clearly } \frac{12}{30} < \frac{21}{30} < \frac{22}{30}$$

$$\Rightarrow \frac{2}{5} < \frac{7}{10} < \frac{11}{5}$$

Hence given fractions in ascending order are: 25,710115

(b) 1924,56,712

Solution: The given fractions are 1924,56,712
Here LCM of 24, 6, 12 is 24.

$$\therefore \frac{19\times1}{24\times1}, \frac{5\times4}{6\times4}, \frac{7\times2}{12\times2}$$

$$\text{Thus } \frac{19}{24} < \frac{20}{24} > \frac{14}{24}$$

On arranging in ascending Order, we get
1424,1924,2024
⇒ 712,1924,56

Question 3. Write the following fractions in descending order.
(a) 2516,78,134,1732

Solution:

$$\frac{25}{16}=\frac{25\times2}{16\times2}=\frac{50}{32}, \frac{7}{8}=\frac{7\times4}{8\times4}=\frac{28}{32}$$

$$\frac{13}{4}=\frac{13\times8}{4\times8}=\frac{104}{32}, \frac{17}{32}=\frac{17\times1}{32\times1}=\frac{17}{32}$$

$$\text{As } \frac{104}{32}>\frac{50}{32}>\frac{28}{32}>\frac{17}{32}. \text{ So, } \frac{13}{4}>\frac{25}{16}>\frac{7}{8}>\frac{17}{32}$$

(b) 34,125,712,54

Solution:

$$\frac{3}{4}=\frac{3\times15}{4\times15}=\frac{45}{60}, \frac{12}{5}=\frac{12\times12}{5\times12}=\frac{144}{60}$$

$$\frac{7}{12}=\frac{7\times5}{12\times5}=\frac{35}{60}, \frac{5}{4}=\frac{5\times15}{4\times15}=\frac{75}{60}$$

$$\text{As } \frac{144}{60}>\frac{75}{60}>\frac{45}{60}>\frac{35}{60}. \text{ So, } \frac{12}{5}>\frac{5}{4}>\frac{3}{4}>\frac{7}{12}$$

Figure it Out (Page No. 179)

Question 1. Add the following fractions using Brahmagupta's method:

(a) 27+57+67

Solution: 27+57+67
= 2+5+67=137
=1 67

(b) 34+13

Solution: 34+13=34×33+13×44
= 912+412=9+412
= 1312
= 1 112

(c) 23+56

Solution: 23+56=23×22+56
46+56=96=32
= 1 12

(d) 23+27

Solution: 23+27=23×77+27×33
= 1421+621=2021

(e) 34+13+15

Solution: 4560+2060+1260
= 7760
= 11760

(f) 23+45

Solution: 1015+1215=2215
= 1715

(g) 45+23

Solution: 1215+1015=2215
= 1715

(h) 35+58

Solution: 2440+2540=4940
= 940

(i) 92+54

Solution: 184+54=234
= 534

(j) 83+27

Solution: 5621+621=6221
= 22021

(k) 34+13+15

Solution: 4560+2060+1260=7760
= 11760

(l) 23+45+37

Solution: 70105+84105+45105=199105
= 194105

(m) 92+54+76

Solution: 5412+1512+1412=8312
= 1112

Question 2. Rahim mixes 23 liters of yellow paint with 34 liters of blue paint to make green paint What is the volume of green paint he has made?

Solution: Quantity of yellow paint added = 23 litres
Quantity of blue paint added = 34 litres
Total quantity of green paint made = 23 + 34
LCM of 3 and 4 is 12.
23=23×44=812
34=34×33=912
812+912=8+912=1712
So, the total quantity of paint made is 1712 liters.

Question 3. Geeta bought 25 meter of lace and Shamim bought 34 meter of the same lace to put a complete border on a table cloth whose perimeter is 1 meter long. Find the total length of the lace they both have bought. Will the lace be sufficient to cover the whole border?

Solution: Length of lace bought by Geeta = 25 m
Length of lace bought by Shamim = 34 m
Total length of lace bought = 25 + 34
LCM of 5 and 4 is 20.
25=25×44=820
34=34×55=1520
820+1520=2320=1320
This length is more than 1 m. So, lace is more than sufficient or will be left extra after covering the border.

Figure it Out (Page No. 181)

Question 1. 58−38

Solution: Given 58−38
As fractional unit is same i.e., 18 we shall simply subtract numerators keeping fractional unit as 18
Then 58−38=5−38
= 28=14 (representing in simplest form)

Question 2. 79−59

Solution: Given 79−59
As fractional unit is same i.e., 19 we shall simply subtract numerators keeping fractional unit as 19
79−59
= 7−59=29

Question 3. 1027−1271027−127

Solution: Here 1027−127
= 10−127
= 927=13

Figure it Out (Page No. 182)

Question 1. Carry out the following subtractions using Brahmagupta's method:
(a) 815−315

Solution: Given 815−315
Fractional unit for both fractions is 115 then
815−315=8−315
= 515=13

(b) 25−415

Solution: Given 25−415
Here LCM of 5 and 15 is 15. Fractional unit for both fractions should be 115
then 2×35×3−4×115×1
= 615−415
= 6−415
= 215

(c) 56−49

Solution: Given 56−49
Hence LCM of 6 and 9 is 18. Fractional unit for both fractions should be 118 then

$$\frac{5\times 3}{6\times 3}-\frac{4\times 2}{9\times 2}$$

$$=\frac{15}{18}-\frac{8}{18}$$

$$=\frac{15-8}{18}$$

$$=\frac{7}{18}$$

(d) 23−12
Solution: Given 23−12
Here LCM of 3 and 2 is 6. Fractional unit for both fractions should be 16

$$\therefore \quad \frac{2\times 2}{3\times 2}-\frac{1\times 3}{2\times 3}$$

$$=\frac{4}{6}-\frac{3}{6}$$

$$=\frac{4-3}{6}$$

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

Question 2. Subtract as indicated:
(a) 134 from 103

Solution: The denominators of the given fractions are 3 and 4. The LCM of 3 and 4 is 12.

Then 134=13×34×3=3912,103=10×43×4=4012
Therefore, 103−134=4012−3912=112

(b) 185 from 233

Solution: The denominators of the given fractions are 3 and 5.
The LCM of 3 and 5 is 15.
Then, 233=23×53×5=11515,185=18×35×3=5415
Therefore, 233−185=11515−5415=6115=4115

(c) 297 from 457

Solution: The denominators are same.
Therefore, 457−297=167=227

Question 3. Solve the following problems:
(a) Jaya's school is 710 km from her home. She takes an auto for 12 km from her home daily, and then walks the remaining distance to reach her school. How much does she walk daily to reach the school?

Solution: (a) Total distance between school and home = 710 km
Distance travelled in Auto = 12 km.
∴ Distance she walks daily to reach the school

$$= \left(\frac{7}{10} - \frac{1}{2}\right) \text{km}$$
$$= \left(\frac{7}{10} - \frac{1}{2} \times \frac{5}{5}\right) \text{km}$$
$$= \left(\frac{7}{10} - \frac{5}{10}\right) \text{km}$$
$$= \frac{2}{10} \text{km}$$
$$= \frac{1}{5} \text{km}$$

(b) Jeevika takes 103 minutes to take a complete round of the park and her friend Namit takes 134 minutes to do the same. Who takes less time and by how much?

Solution: Time taken by Jeevika = 103 minutes
and time taken by Narnit = 134 minutes
Now, 103×44=4012 and 134×33=3912
Clearly, 103 > 134
∴ Jeevika takes less ti me by (103−134) minutes
= (4012−3912) minutes
= 112 minutes.