

EXERCISE

PAGE: 38 In guestions 1 to 20, out of four options, only one is correct. Write the correct answer. 1. (2/5) $\times \frac{5\frac{1}{5}}{5}$ is equal to: (a) 26/25 (b) 52/25 (c) 2/5 (d) 6 Solution:-(b) 52/25 First we have to convert the mixed fraction into improper fraction $5\frac{1}{5} = 26/5$ Then, (2/5) × (26/5) = 52/25 2. 3³/₄ ÷ ³/₄ is equal to: (d) 45/16 (a) 3 (b) 4 c) 5 Solution:c) 5 First we have to convert the mixed fraction into improper fraction $3\frac{3}{4} = 15/4$ Then, 15/4 ÷ ¾ $=(15/4)/(\frac{3}{4})$ $=(15/4) \times (4/3)$ $= (15 \times 4) / (4 \times 3)$ $= (5 \times 1) / (1 \times 1)$ = 5 3. A ribbon of length 5¼ m is cut into small pieces each of length ¾m. Number of pieces will be: (b) 6 (c) 7 (d) 8 (a) 5 Solution:-(c) 7 First we have to convert the mixed fraction into improper fraction $5\frac{1}{4} = 21/4$ Then, 21/4 ÷ ¾ $= (21/4)/(\frac{3}{4})$ $= (21/4) \times (4/3)$ $= (21 \times 4) / (4 \times 3)$ $= (7 \times 1) / (1 \times 1)$ = 7



4. The ascending arrangement of (2/3), (6/7), (13/21) is:

(a) 6/7, 2/3, 13/21 (c) 6/7, 13/21, 2/3 Solution:-

(b) 13/21, 2/3, 6/7

LCM of 21, 3, 7 = 21

Now, let us change each of the given fraction into an equivalent fraction having 21 as the denominator.

(b) 13/21, 2/3, 6/7

(d) 2/3, 6/7, 13/21

 $[(13/21) \times (1/1)] = (13/21)$ $[(2/3) \times (7/7)] = (14/21)$ $[(6/7) \times (3/3)] = (18/21)$

Clearly,

(13/21) < (14/21) < (18/21)

Hence,

(13/21) < (2/3) < (6/7)

Hence, the given fractions in ascending order are (13/21), (2/3), (6/7)

5. Reciprocal of the fraction 2/3 is:

(a) 2 (b) 3 (c) 2/3 (d) 3/2

Solution:-

(d) 3/2

The reciprocal of a non-zero fraction is obtained by interchanging its numerator and denominator.

6. The product of 11/13 and 4 is:

5	3	2	5
(a) $3\frac{3}{13}$	(b) $5\frac{3}{13}$	(c) $13\frac{5}{5}$	(d) $13\frac{3}{3}$

Solution:-

(a)
$$3\frac{5}{13}$$

= (11/13) × 4
= 44/13
= $3\frac{5}{13}$

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22/5

7. The product of 3 and
$$4\frac{2}{5}$$
 is :
(a) $17\frac{2}{5}$ (b) 24/5 (c) $13\frac{1}{5}$ (d) $13\frac{5}{3}$
Solution:-
(c) $13\frac{1}{5}$
First we have to convert the mixed fraction into improper fraction $4\frac{2}{5}$ =
Then, $3 \times 22/5$

$$= 66/5$$

 $= 13\frac{1}{5}$

8. Pictorial representation of 3 × 2/3 is:



9. 1/5 ÷ 4/5 equal to: (a) 4/5 (b) 1/5 (c) 5/4 (d) ¼ Solution:-(d) ¼ $= 1/5 \div 4/5$ = (1/5)/(4/5) $= (1/5) \times (5/4)$ = 5/20 ... [divide both numerator and denimonitor by 5] = 1/4 **10.** The product of **0.03** × **0.9** is: (d) 0.0027 (a) 2.7 (b) 0.27 (c) 0.027 Solution:-

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(c) 0.027 0.03×0.9 can be written as = $(3/100) \times (9/10)$ = 27/1000 On dividing a decimal by 1000, the decimal point is shifted to the left by three places. = 0.027 11. (5/7) ÷ 6 is equal to: (c) 30/42 (a) 30/7 (b) 5/42 (d) 6/7 Solution:-(b) 5/42 $= 5/7 \div 6/1$ = (5/7)/(6/1) $= (5/7) \times (1/6)$ = 5/42 12. $5\frac{1}{6} \div 9/2$ is equal to: (c) $5\frac{1}{27}$ (a) 31/6 (b) 1/27 (d) 31/27

Solution:-(d) 31/27

First we have to convert the mixed fraction into improper fraction $5\frac{1}{6}$ = 31/6 Then,

= 31/6 ÷ 9/2 = (31/6)/ (9/2) = (31/6) × (2/9) = (31/3) × (1/9) = 31/27

13. Which of the following represents 1/3 of 1/6?Solution:-(a) (1/3) + (1/6)(b) (1/3) - (1/6)(c) $(1/3) \times (1/6)$ Solution:-(c) $(1/3) \times (1/6)$

14. 3/7 of 2/5 is equal to(a) 5/12(b) 5/35(c) 1/35(d) 6/35



Solution:-

(d) 6/35 3/7 of 2/5 is equal to = (3/7) × (2/5) = 6/35

15. One packet of biscuits requires $2\frac{1}{2}$ cups of flour and $1\frac{2}{3}$ cups of sugar. Estimated total quantity of both ingredients used in 10 such packets of biscuits will be

(a) less than 30 cups

(b) between 30 cups and 40 cups

(c) between 40 cups and 50 cups

(d) above 50 cups

Solution:-

(c) between 40 cups and 50 cups

From the question it is given that,

One packet of biscuits requires $2\frac{1}{2}$ cups of flour = 5/2

One packet of biscuits requires $1\frac{2}{3}$ cups of sugar. = 5/3

Total ingredients for one packet of biscuits = (5/2) + (5/3)

$$=(15+10)/6$$

= 25/6

Then, total quantity of both ingredients used in 10 such packets of biscuits = $10 \times (25/6)$

 $= 5 \times (25/3)$ = 125/3 = $41\frac{2}{3}$

 16. The product of 7 and 6¾ is

 (a) 42¼
 (b) 47¼

 Solution:

 (b) 47¼

 First we have to convert the mixed fraction into improper fraction $6\frac{3}{4} = 27/4$
 $= 7 \times (27/4)$

 = 189/4

 $= 47\frac{3}{4}$

 17. On dividing 7 by 2/5, the result is

(a) 14/2 (b) 35/4 (c) 14/5 (d) 35/2 Solution:-(d) 35/2



= 7/(2/5) $= 7 \times (5/2)$ = 35/2 18. $2\frac{2}{3} \div 5$ is equal to (a) 8/15 (c) 40/5 (d) 8/3 (b) 40/3 Solution:-(a) 8/15 First we have to convert the mixed fraction into improper fraction $2\frac{2}{3}$ = 8/3 Then, $= (8/3) \div 5$ = (8/3)/(5/1) $= (8/3) \times (1/5)$ = 8/15 19. 4/5 of 5 kg apples were used on Monday. The next day 1/3 of what was left was used. Weight (in kg) of apples left now is (b) 1/14 (d) 4/21 (a) 2/7 (c) 2/3 Solution:-(c) 2/3 From the question it is given that, 4/5 of 5 kg apples were used on Monday = $(4/5) \times 5$ = 20/5 = 4 kg Then, The next day 1/3 of what was left was used = $(1/3) \times 1$ = 1/3 kgSo, Weight (in kg) of apples left now is = 1 - (1/3)= (3 - 1)/3= 2/3 kg of apples 20. The picture

Interprets



> = (7 - 2)/7 = 5/7

(d) 3 ÷ ¼

(a) $\frac{1}{4} \div 3$ (b) $3 \times \frac{1}{4}$ (c) $\frac{3}{4} \times 3$ Solution:-(b) $3 \times \frac{1}{4}$ From the given picture, $\frac{1}{4} + \frac{1}{4} = \frac{3}{4}$

In Questions 21 to 44, fill in the blanks to make the statements true. 21. Rani ate 2/7 part of a cake while her brother Ravi ate 4/5 of the remaining. Part of the cake left is ______ Solution:-

Rani ate 2/7 part of a cake while her brother Ravi ate 4/5 of the remaining. Part of the cake left is 1/7.

Now, let us assume total part of cake be 1.

Then, from the question, given that Rani ate 2/7 part of a cake = 1 - (2/7)

So, Ravi ate 4/5 of the remaining cake = $(4/5) \times (5/7)$ = 4/7 Therefore, the part of the cake left = (5/7) - (4/7)

= 1/7

22. The reciprocal of 3/7 is

Solution:-

The reciprocal of 3/7 is 7/3

The reciprocal of a non-zero fraction is obtained by interchanging its numerator and denominator.

23. 2/3 of 27 is _____ Solution:- $2/3 ext{ of } 27 ext{ is } \frac{18}{18}$. $= 2/3 \times 27$ $= 2 \times 9$ = 18

24. 4/5 of 45 is _____ **Solution:**-4/5 of 45 is <u>36</u>. = 4/5 × 45



= 4 × 9 = 36

25. 4 × $6\frac{1}{3}$ is equal to _____ Solution:- $4 \times \frac{6\frac{1}{3}}{1}$ is equal to <u>76/3</u> First we have to convert the mixed fraction into improper fraction $6\frac{1}{3} = 19/3$ Then, 4 × 19/3 = 76/326. $\frac{1}{2}$ of $\frac{4^2}{7}$ is _____ Solution:- $\frac{1}{2}$ of $\frac{4^2}{7}$ is <u>15/7</u>. First we have to convert the mixed fraction into improper fraction = 30/7 Then, ½ × (30/7) = 15/7 27. 1/9 of 6/5 is Solution:-1/9 of 6/5 is 2/15. $= (1/9) \times (6/5)$ $= (1/3) \times (2/5)$ = 2/1528. The lowest form of the product $2rac{3}{7}$ × (7/9) is Solution:-The lowest form of the product $2\frac{3}{7} \times (7/9)$ is (17/9) or $1\frac{8}{9}$ First we have to convert the mixed fraction into improper fraction $2\frac{3}{7}$ = 17/7 Then, (17/7) × (7/9) = 17/9 $=1\frac{8}{9}$ 29. (4/5) ÷ 4 is equal to _____ Solution:-



 $(4/5) \div 4$ is equal to 1/5. = $(4/5) \div 4$ = $(4/5) \times (\frac{1}{4})$ = $(1/5) \times (1/1)$ = 1/5

30. 2/5 of 25 is _____

Solution:-

2/5 of 25 is <u>10</u> = 2/5 × 25 = 2 × 5

= 10

31. (1/5) ÷ (5/6) = (1/5) _____ (6/5) Solution:-

 $(1/5) \div (5/6) = (1/5) \times (6/5)$

While dividing one fraction by another fraction, we multiply the first fraction by the reciprocal of the other.

32. 3.2 × 10 = ____

Solution:-

3.2 × 10 = 32

To multiply a decimal number by 10, we move the decimal point in the number to the right by as many places as many zeros (0) are at the right of one.

33. 25.4 × 1000 = ____

Solution:-

25.4 × 1000 = 25400

To multiply a decimal number by 1000, we move the decimal point in the number to the right by as many places as many zeros (0) are at the right of one.

34. 93.5 × 100 = _____

Solution:-

93.5 × 100 = 9350

To multiply a decimal number by 100, we move the decimal point in the number to the right by as many places as many zeros (0) are at the right of one.



35. 4.7 ÷ 10 = _____

Solution:-

 $4.7 \div 10 = 0.47$

To divide a decimal number by 10, shift the decimal point in the decimal number to the left by as many places as there are zeros over 1, to get the quotient.

= 4.7/10

= 0.47

36. 4.7 ÷ 100 = _____

Solution:-

4.7 ÷ 100 = 0.047

To divide a decimal number by 100, shift the decimal point in the decimal number to the left by as many places as there are zeros over 1, to get the quotient.

= 4.7/100 = 0.047

37. 4.7 ÷ 1000 = _____

Solution:-

 $4.7 \div 1000 = 0.0047$

To divide a decimal number by 1000, shift the decimal point in the decimal number to the left by as many places as there are zeros over 1, to get the quotient.

= 4.7/1000 = 0.0047

38. The product of two proper fractions is ______ than each of the fractions that are multiplied.

Solution:-

The product of two proper fractions is <u>less</u> than each of the fractions that are multiplied. Consider the two proper fractions, 4/5 and 2/4

Then, 0.4 is multiplied to the proper fraction less than each of the fractions that are multiplied = $(4/5) \times 0.4$

= 0.32

39. While dividing a fraction by another fraction, we ______ the first fraction by



the _____ of the other fraction.

Solution:-

While dividing a fraction by another fraction, we <u>multiply</u> the first fraction by the <u>reciprocal</u> of the other fraction.

Example,

 $= (1/5) \div (5/6) \\ = (1/5) \times (6/5)$

40. 8.4 ÷ _____ = 2.1

Solution:-

 $8.4 \div \underline{4} = 2.1$ Let us assume the missing fraction be x, Then,

> 8.4 ÷ x = 2.1 8.4/x = 2.1

By cross multiplication, we get,

x = 8.4/2.1	
x = 84/21	[divide both numerator and denominator by 3]
x = 28/7	[divide both numerator and denominator by 7]
x = 4	

41. 52.7 ÷ _____ = 0.527 Solution:- $52.7 \div 100 = 0.527$ Let us assume the missing fraction be x, Then, $52.7 \div x = 0.527$ 52.7/x = 0.527By cross multiplication, we get, x = 52.7/0.527 x = 52700/527 ... [divide both numerator and denominator by 527] x = 100

42. 0.5 _____ 0.7 = 0.35 Solution:-

0.5 <u>×</u> 0.7 = 0.35

While multiplying two decimal numbers, first multiply them as whole numbers. Count



the number of digits to the right of the decimal point in both the decimal numbers. Add the number of digits counted. Put the decimal point in the product by counting the number of digits equal to sum obtained from its rightmost place.

= 0.5 × 0.7 = 5 × 7 = 35 = 0.35

43. 2 (5/3) = 10/3 Solution:-2 × (5/3) = 10/3

44. 2.001 ÷ 0.003 = ___

Solution:-2.001 ÷ 0.003 = 667 = 2.001/0.003 = 2001/3 ... [divide both numerator and denominator by 3] = 667

In each of the Questions 45 to 54, state whether the statement is True or False. 45. The reciprocal of a proper fraction is a proper fraction. Solution:-

False.

Consider the proper fraction 5/8.

Then, reciprocal of 5/8 = 8/5.

Therefore the obtained fraction is improper fraction.

46. The reciprocal of an improper fraction is an improper fraction.

Solution:-False. Consider the improper fraction 5/3. Then, reciprocal of 5/3 = 3/5. Therefore the obtained fraction is proper fraction.

47. Product of two fractions = (Product of their denominators)/ (Product of their numerators)

Solution:-



False.

Product of two fractions = (Product of their numerators)/ (Product of their denominators)

48. The product of two improper fractions is less than both the fractions. Solution:-

False.

The product of two improper fractions is more than each of the fractions that are multiplied.

Consider the two improper fractions, 5/4 and 4/2

Then, 2.5 is multiplied to the improper fraction more than each of the fractions that are multiplied = $(5/4) \times 2.5$

= 3.125 And (4/2) × 2.5 = 5

49. A reciprocal of a fraction is obtained by inverting it upside down.

Solution:-

True. Reciprocal of 8/9 = 9/8

50. To multiply a decimal number by 1000, we move the decimal point in the number to the right by three places.

Solution:-

True.

To multiply a decimal number by 1000, we move the decimal point in the number to the right by as many places as many zeros (0) are at the right of one. $2.5 \times 1000 = 2500$

51. To divide a decimal number by 100, we move the decimal point in the number to the left by two places.

Solution:-

True. Example: 3.4/100 = 0.034



52. 1 is the only number which is its own reciprocal.

Solution:-

True.

We know that, if the denominator is not given then we have to assume 1 always. So, reciprocal of 1/1 = 1/1

53. 2/3 of 8 is same as (2/3) ÷ 8

Solution:-

False. 2/3 of 8 = (2/3) × 8

54. The reciprocal of 4/7 is 4/7

Solution:-False. The reciprocal of 4/7 is 7/4.

55. If 5 is added to both the numerator and the denominator of the fraction 5/9, will the value of the fraction be changed? If so, will the value increase or decrease? Solution:-

If 5 is added to both the numerator and denominator of the fraction 5/9 = 10/14But, $5/9 \neq 10/14$

Yes the value of the fraction is changed and also the value is increased.

56. What happens to the value of a fraction if the denominator of the fraction is decreased while numerator is kept unchanged?

Solution:-

The value of a fraction is increased when the denominator of the fraction is decreased while numerator is kept unchanged.

Example: $\frac{1}{4} = 0.25$ $\frac{1}{2} = 0.5$

57. Which letter comes 2/5 of the way among A and J?

Solution:-

There are 10 letters from A to J So, 2/5 of $10 = 2/5 \times 10$ $= 2 \times 2$

= 4



The 4th letter from A to J is D.

Therfore, D comes 2/5 of the way among A and J.

58. If 2/3 of a number is 10, then what is 1.75 times of that number? Solution:-

From the question it is given that, 2/3 of a number is 10. Let us assume the number be 'P'. Then, 2/3 of P = 10 2/3 × P = 10 By cross multiplication we get, P = 10 × 3/2 P = 5 × 3 P = 15 So, the number is 15 Again it is given in question that, 1.75 times of that number = ? = 1.75 of 15 = 1.75 × 15

= 1.75 × 15 = 26.25

59. In a class of 40 students, 1/5 of the total number of students like to eat rice only, 2/5 of the total number of students like to eat chapati only and the remaining students like to eat both. What fraction of the total number of students like to eat both?

Solution:-

From the question it is given that,

Number of students in a class = 40 students

1/5 of the total number of students like to eat rice only = $1/5 \times 40$

= 8 students

2/5 of the total number of students like to eat chapati only = $2/5 \times 40$

= 2 × 8

= 16 students

Then,

Number of students like to eat both = 40 - (8 + 16)



= 16 students

Fraction of the total number of students like to eat both = 16/40 = 2/5

60. Renu completed 2/3 part of her home work in 2 hours. How much part of her home work had she completed in 1¼ hours? Solution:-

From the question it is given that,

Renu completed 2/3 part of her home work in 2 hours.

Let us assume total part of homework be 'P'.

Then,

2/3 of P = 2

$$2/3 \times P = 2$$

By cross multiplication we get,

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P = 2 \times 3/2
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P = 3 home work
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So, part of her home work she had completed in 1¼ hours i.e. 5/4 hours Let us assume part of home work she had completed in 5/4 hours be = Q Then,

Q of 3 = 5/4 Q × 3 = 5/4

By cross multiplication we get,

Therefore, Renu completed 5/12 part of her home work in 5/4 hours.

61. Reemu read (1/5)th pages of a book. If she reads further 40 pages, she would have read (7/10)th pages of the book. How many pages are left to be read? Solution:-

From the question it is given that,

Reemu read $(1/5)^{th}$ pages of a book.

Let us assume the total number of pages in the book be 'P'.

Then, number of pages read by Reemu = (1/5) of P

And also it is given in the question, If she reads further 40 pages, she would have read $(7/10)^{\text{th}}$ pages of the book. = $(7/10) \times P$

So,

 $((1/5) \times P) + 40 = (7/10) \times P$



(P + 200)/5 = (7P/10)By cross multiplication we get, 2P + 400 = 7P 5P = 400 P = 400/5 P = 80Then, pages read by Reemu = Total pages – Pages read P - (7P/10) = (3P/10) $(3/10) \times 80$ 24 pages

Therefore, 24 pages are left to be read.

62. Write the number in the box such that

$$\frac{3}{7} \times \square = \frac{15}{98}$$

Solution:-

Let us assume the missing number be P. Then,

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(3/7) \times P = 15/98
By cross multiplication we get,
P = (15/98) \times (7/3)
P = (5/14) \times (1/1)
P = 5/14
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Therefore,

$$\frac{3}{7} \times \boxed{\frac{5}{14}} = \frac{15}{98}$$