



MATHS

BOOKS - ICSE

FRACTIONS

Solved Examples

1. Find the product

$$\frac{5}{8} \times 12$$



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2. Find the product

$$\frac{3}{7} \times \frac{16}{9}$$



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3. Find the product

$$\frac{34}{9} \times 15$$



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4. Find the product

$$\frac{61}{4} \times \frac{15}{7}$$



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5. Find the product

$$\frac{6}{25} \times \frac{15}{8} \times \frac{9}{12}$$



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6. Find the product

$$\frac{42}{3} \times 3\frac{3}{7} \times 2\frac{1}{6}$$



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7. The cost of 1 pens is Rs $114\frac{1}{4}$ find the cost of 19 pens



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8. A car moves at a uniform speed of $43\frac{1}{5}$ km
hour how much distance will it cover in $3\frac{1}{3}$
hours



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9. Find the reciprocal of

$$\frac{5}{11}$$



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10. Find the reciprocal of

1



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11. Find the reciprocal of

$$\frac{1}{213}$$


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12. Find the reciprocal of

$$12 \frac{9}{11}$$



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13. Simplify

$$\frac{17}{16} \div \frac{3}{4}$$



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14. Simplify

$$15 \div \frac{3}{17}$$



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15. Simplify

$$\frac{11}{120} \div 22$$



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16. Simplify

$$3\frac{4}{7} \div 5$$



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17. Simplify

$$85 \div \frac{1}{11} \div 32\frac{2}{3}$$



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18. A cable of length $257 \frac{1}{4}$ m has to be cut into 21 pieces of equal length. Find the length of each piece.



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19. A pile of notebooks is $14 \frac{1}{4}$ cm thick. If each notebook is $1 \frac{3}{16}$ cm thick, then find the number of notebooks in the pile



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20. If the product of two fractions is $16\frac{1}{9}$ and one of the fractions is $4\frac{2}{7}$, then find the other fraction



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Exercise 3 A

1. Find the product

$$\frac{5}{6} \times \frac{3}{7}$$



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2. Find the product

$$\frac{7}{18} \times \frac{9}{14}$$



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3. Find the product

$$28 \times \frac{7}{8}$$



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4. Find the product

$$7 \times \frac{1}{7}$$



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5. Find the product

$$2\frac{1}{25} \times \frac{5}{17}$$



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6. Find the product

$$1\frac{1}{13} \times 7\frac{3}{7}$$



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7. Find the product

$$\frac{4}{17} \times 7\frac{1}{12}$$



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8. Find the product

$$7\frac{1}{4} \times \frac{7}{58} \times 1\frac{11}{21}$$



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9. Find the product

$$\frac{1}{10} \times 91 \times 5\frac{11}{13}$$



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10. Find the product

$$7\frac{1}{4} \times 2\frac{3}{16} \times 2\frac{2}{7}$$



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11. A car can travel $12\frac{1}{2}$ km in 1 litre of petrol
how much distances can it travel in $42\frac{3}{5}$ litres
of petrol



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12. A graphic designer charges Rs $27\frac{3}{5}$ for each diagram. Find the amount he will charge if he designs 186 diagrams for a book.



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13. If a cloth costs Rs $715\frac{1}{4}$ per metre, find the cost of $3\frac{2}{5}$ metres of this cloth.



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14. Advertising in a magazine costs ? Rs 1472 $\frac{2}{5}$ per square inch. Find the cost of an advertisement of $17\frac{6}{7}$? square inch.



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15. A car travelled from city A to city B with a uniform speed of $52\frac{2}{7}$ km per hour. Find the ' distance between the two cities, if it took $4\frac{3}{8}$ hours for the car to reach city B from city A.



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16. The length of a rectangular plot of land is $29\frac{3}{7}$ m. If its breadth is $12\frac{8}{11}$ m, find its area.



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Exercise 3 B

1. Find the reciprocal of

$$\frac{13}{17}$$



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2. Find the reciprocal of

$$\frac{3}{313}$$



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3. Find the reciprocal of

217



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4. Find the reciprocal of

$$\frac{1}{1024}$$



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5. Find the reciprocal of

$$3\frac{1}{3}$$



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6. Find the reciprocal of

$$11 \frac{1}{11}$$



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7. Find the reciprocal of

$$1 \frac{1}{2}$$



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8. Find the reciprocal of

$$125 \frac{1}{8}$$



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9. Divide

$$\frac{1}{2} \div \frac{1}{3}$$



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10. Divide

$$\frac{3}{14} \div \frac{11}{42}$$



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11. Divide

$$1 \div 6\frac{2}{3}$$



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12. Divide

$$13 \frac{1}{3} \div 10$$



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13. Divide

$$12 \frac{1}{12} \div \frac{5}{36}$$



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14. Divide

$$\frac{13}{46} \div 2\frac{1}{11}$$



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15. Divide

$$\frac{20}{31} \div 54$$



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16. Divide

$$9\frac{4}{5} \div 3\frac{23}{25}$$



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17. Divide

$$32\frac{1}{2} \div 8\frac{3}{4}$$



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18. Divide

$$8\frac{1}{21} \div 1\frac{6}{7}$$



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19. Divide

$$6\frac{3}{16} \div 3\frac{1}{7}$$



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20. Divide

$$3 \frac{11}{15} \div 19 \frac{3}{5}$$



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21. By what fraction should $\frac{9}{25}$ be multiplied to get $\frac{7}{15}$



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22. If the cost of $6\frac{1}{4}$ m of cloth is Rs $1421\frac{7}{8}$

then find the cost of 1 metre of cloth



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23. How many pieces of length $3\frac{5}{7}$ m each can

be cut from a wall paper 52 m long



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24. A log of wood $6\frac{2}{7}$ m in length, was cut into 11 pieces. What is the length of each piece?



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25. A car covers $641\frac{1}{4}$ km in $43\frac{1}{8}$ litres of fuel. How much distance can this car cover in 1 litre of fuel?



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26. The area of a rectangular plot of land is $817\frac{4}{5}$ sq. m. If its breadth is $21\frac{3}{4}$ m, find its length.



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27. The area of a sheet of paper is $623\frac{7}{10}$ sq. cm. If its length is $29\frac{7}{10}$ cm, find its width.



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28. A bundle of 500 sheets of paper has a net weight of $2\frac{3}{10}$ kg. Find the weight of 1 sheet of paper.



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29. A car travels $283\frac{1}{2}$ km in $4\frac{2}{3}$ hours. How far does this car go in 1 hour, travelling at the same speed?



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30. The product of two fractions is $8\frac{7}{25}$. If one of them is $3\frac{1}{15}$, find the other.



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Example

$$1. 2\frac{3}{5} + 1\frac{4}{5} + 3\frac{2}{5}$$

A. $= 7\frac{4}{7}$

B. $= 7\frac{4}{5}$

C. $= 7\frac{3}{5}$

$$D. = 5\frac{4}{5}$$

Answer: B



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$$2. 5\frac{2}{9} - 2\frac{4}{9} - 1\frac{1}{9}$$

$$A. = 1\frac{1}{3}$$

$$B. = 1\frac{2}{7}$$

$$C. = 1\frac{2}{3}$$

$$D. = 1\frac{2}{11}$$

Answer: C



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$$3. 2\frac{5}{4} - 4\frac{7}{6} + 3\frac{1}{3}$$



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4. What should be subtracted from

$$\left(\frac{9}{15} + 2\frac{2}{5}\right) \text{ to get } \frac{2}{25}?$$

A. $= 2\frac{13}{15}$

$$\text{B.} = 2\frac{19}{23}$$

$$\text{C.} = 2\frac{19}{25}$$

$$\text{D.} = 2\frac{23}{25}$$

Answer: D



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5. A milk vendor was selling milk to customers from a vessel containing $12\frac{4}{5}$ litres of milk. He sold of $11\frac{1}{2}$ litres and then refilled the vessel

with $9\frac{4}{15}$ litres of milk again. How much milk is available with the vendor now?

A. = $8\frac{17}{30}$ litres

B. = $11\frac{17}{30}$ litres

C. = $10\frac{17}{30}$ litres

D. = $10\frac{17}{57}$ litres

Answer: C



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6. Evaluate: $\frac{1}{4} \times 3$

A. $\frac{3}{5}$

B. $\frac{3}{8}$

C. $\frac{1}{4}$

D. $\frac{3}{4}$

Answer: D



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7. Evaluate: $\frac{2}{5} \times 4$

A. $\frac{9}{5}$

B. $\frac{8}{5}$

C. $\frac{6}{5}$

D. $\frac{5}{8}$

Answer: B



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8. Evaluate: $4 \times \frac{9}{5}$

A. $7\frac{2}{5}$

B. $7\frac{1}{6}$

C. $7\frac{1}{5}$

D. $6\frac{1}{5}$

Answer: C



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9. Evaluate: $6 \times 3\frac{3}{4}$

A. $22\frac{1}{2}$

B. $22\frac{5}{2}$

C. $21\frac{1}{2}$

D. $23\frac{1}{2}$

Answer: A



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10. Multiply: $\frac{3}{4} \times \frac{2}{9}$

A. $\frac{5}{6}$

B. $\frac{1}{6}$

C. $\frac{7}{6}$

D. $\frac{1}{7}$

Answer: B



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11. Find: a. $\frac{10}{21} \times \frac{7}{15}$

A. $\frac{5}{9}$

B. $\frac{4}{9}$

C. $\frac{2}{9}$

D. $\frac{1}{9}$

Answer: C



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12. Find: b. $\frac{15}{16} \times \frac{4}{21}$



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13. Find: c. $3\frac{4}{5} \times \frac{35}{38}$

A. $3\frac{3}{2}$

B. $3\frac{1}{2}$

C. $3\frac{1}{5}$

D. $3\frac{1}{4}$

Answer: B



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14. Find: d. $4\frac{4}{7} \times 5\frac{3}{5}$

A. $25\frac{3}{8}$

B. $25\frac{3}{7}$

C. $25\frac{2}{5}$

D. $25\frac{3}{5}$

Answer: D



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15. Find: a. $12 \times \frac{5}{24}$

A. $2\frac{1}{2}$

B. $2\frac{5}{7}$

C. $9\frac{1}{2}$

D. $15\frac{1}{2}$

Answer: A



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16. Find: b. $7 \times \frac{5}{49}$

A. $\frac{6}{7}$

B. $\frac{5}{8}$

C. $\frac{3}{7}$

D. $\frac{5}{7}$

Answer: D



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17. Find: c. $5\frac{7}{9} \times 6$



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18. Sujay eats $2\frac{2}{3}$ packets of cookies in a day.

How many packets of cookies will he eat in

$17\frac{1}{2}$ days?

A. $= 86\frac{2}{3}$

B. $= 46\frac{2}{9}$

C. $= 49\frac{2}{3}$

$$D. = 46\frac{2}{3}$$

Answer: D



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19. Sakshi's car travels $16\frac{2}{5}$ km per litre of petrol. She fills $28\frac{1}{3}$ litres of petrol in the car.

How much distance can the car cover?

$$A. = 463\frac{2}{3} \text{ km}$$

$$B. = 464\frac{2}{7} \text{ km}$$

$$C. = 464\frac{2}{3} \text{ km}$$

$$D. = 264\frac{2}{3} \text{ km}$$

Answer: C



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20. Find: a. $\frac{2}{5}$ of 3 hours

A. 2 hour 12 minutes

B. 1 hour 32 minutes

C. 1 hour 12 minutes

D. 1 hour 38 minutes

Answer: C



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21. Find: b. $\frac{3}{4}$ of 3 km

A. 2 km 250 m

B. 1 km 250 m

C. 2 km 500 m

D. 1 km 500 m

Answer: A



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22. Find: c. $\frac{2}{3}$ of 2 years



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23. What fraction is $3L\ 150mL$ of $7L\ 350mL$?

A. $\frac{9}{7}$

B. $\frac{3}{7}$

C. $\frac{8}{7}$

D. $\frac{3}{2}$

Answer: B



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24. Which is greater: $\frac{3}{5}$ of $\frac{1}{4}$ or $\frac{2}{7}$ of $\frac{5}{8}$?

A. $\frac{3}{5}$ of $\frac{1}{4}$

B. $\frac{2}{7}$ of $\frac{5}{8}$

C. Both are equal

D. Cannot be determined

Answer: B



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25. One-third of the students of a class have chosen to play cricket. One-half of the students who have chosen to play cricket have also opted for painting classes. What fraction of students of the class have opted for painting class? If there are 30 students in the

class, how many students have opted for a.
cricket? b. painting class?

A. a. = 15 students.

b. = 5 students.

B. a. = 10 students.

b. = 5 students.

C. a. = 5 students.

b. = 5 students.

D. a. = 10 students.

b. = 9 students.

Answer: B



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26. Fill in the boxes with $<$ or $>$ without actually finding the required product.

a. i. $\frac{5}{9} \times \frac{6}{7} \square \frac{5}{9}$

ii. $\frac{5}{9} \times \frac{6}{7} \square \frac{6}{7}$



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27. Fill in the boxes with $<$ or $>$ without actually finding the required product.

b. *i.* $\frac{7}{4} \times \frac{2}{5} \square \frac{7}{4}$

ii. $\frac{7}{4} \times \frac{2}{5} \square \frac{2}{5}$



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28. Fill in the boxes with $<$ or $>$ without actually finding the required product.

c. *i.* $\frac{9}{5} \times \frac{4}{3} \square \frac{9}{5}$

ii. $\frac{9}{5} \times \frac{4}{3} \square \frac{4}{3}$



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29. Find the reciprocal of $3\frac{5}{7}$.

A. $\frac{7}{26}$

B. $\frac{26}{7}$

C. $\frac{7}{25}$

D. $\frac{25}{7}$

Answer: A



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30. Evaluate: $1 \div \frac{1}{3}$

A. 6

B. 3

C. 1

D. 9

Answer: B



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31. Evaluate: $2 \div \frac{2}{3}$

A. 3

B. 5

C. 7

D. 6

Answer: A



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32. Evaluate: $\frac{1}{2} \div \frac{1}{4}$



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33. Evaluate: $1\frac{1}{2} \div \frac{1}{5}$

A. $8\frac{1}{2}$

B. $7\frac{1}{7}$

C. $7\frac{1}{2}$

D. $9\frac{1}{2}$

Answer: C



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34. Evaluate: $2\frac{1}{2} \div \frac{3}{4}$



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35. Evaluate: $\frac{3}{5} \div 2$



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36. Find $\frac{5}{12} \div 4$.



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37. Find $34 \div \frac{17}{4}$.

A. 7

B. 8

C. 5

D. 9

Answer: B



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38. Find $7 \div 2\frac{4}{5}$.



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39. The total weight of 27 boxes of sweets is $20\frac{1}{4}$ kg. If each box weighs the same, find the weight of each box.



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40. Find $\frac{3}{4} \div \frac{9}{8}$



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41. Find $\frac{13}{15} \div 8\frac{2}{3}$



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42. Suman buys $2\frac{3}{4}$ kg of rice for Rs. $126\frac{1}{2}$
and Madhu buys $4\frac{1}{2}$ kg of rice for Rs. $166\frac{1}{2}$.

Who has bought rice at a lower price and by how much?



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43. Find: $\frac{7}{4} + \left(\frac{3}{4} + \frac{5}{8}\right)$



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44. Find: $\left(\frac{6}{11} \times \frac{77}{48}\right) - \frac{19}{11}$



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45. Find: $\left(\frac{121}{24} \times \frac{4}{11}\right) \div \frac{35}{3}$



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46. Evaluate: $\frac{2}{7}$ of $\left(\frac{1}{10} \div 6\frac{1}{5}\right)$

A. $= \frac{1}{217}$

$$\text{B.} = \frac{1}{219}$$

$$\text{C.} = \frac{3}{217}$$

$$\text{D.} = \frac{6}{217}$$

Answer: A



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47. Find: $\frac{21}{4} \times \frac{30}{49} + \frac{5}{7}$



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48. Find: $\frac{11}{4} + 7\frac{3}{4} \times \frac{8}{15} \div 2\frac{1}{2}$



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49. Solve: $\left(\frac{7}{12} \times \frac{6}{35}\right) - \left(\frac{1}{2} \div \frac{5}{6}\right)$



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50. Evaluate: $\left(\frac{5}{21} \div \frac{15}{14}\right) + \left(\frac{7}{8} \times \frac{4}{7}\right)$



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51. A rope of length $14\frac{2}{5}$ m is cut into 12 equal pieces. Find the length of each piece. Also, find the length of a new rope formed by joining 20 such equal pieces.



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52. A shopkeeper sells a pencil for Rs. $5\frac{1}{4}$. He makes a total of Rs. $446\frac{1}{4}$ by the end of the day. If the pencils came in boxes of 15 each, how many boxes has he sold by the end of the day?



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Try This

1. Evaluate: a. $7\frac{17}{30} + 3\frac{3}{11} - 6\frac{6}{11}$



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2. Evaluate: b. $5\frac{5}{11} - 1\frac{5}{12} - 2\frac{7}{24}$



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3. An insect is crawling up on a vertical wall. It crawls up $12\frac{5}{7}$ inch. Then it slips back $3\frac{11}{14}$ inch and then again crawls up $5\frac{1}{6}$ inch. How far is it from the starting point?

A. $11\frac{6}{25}$ inch

B. $12\frac{2}{21}$ inch

C. $14\frac{2}{21}$ inch

D. $13\frac{5}{28}$ inch

Answer: C



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4. Evaluate: a. $9 \times \frac{4}{17}$



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5. Evaluate: b. $11 \times \frac{9}{11}$



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6. Evaluate: c. $4\frac{5}{7} \times 3$



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7. Evaluate: d. $\frac{14}{25} \times \frac{20}{49}$



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8. Evaluate: e. $3\frac{5}{8} \times \frac{24}{25}$



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9. Evaluate: f. $2\frac{1}{3} \times 1\frac{5}{28}$



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10. Thirty-six students are going on a school trip. One student's ticket costs Rs. $92\frac{1}{2}$. How much will all the tickets cost?



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11. Find: a. $\frac{3}{5}$ of 4 kg



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12. Find: b. $\frac{3}{14}$ of 3 weeks



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13. Find: c. $\frac{2}{11}$ of 550



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14. What fraction is Rs. 1750 of 2800?



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15. Which is greater: $\frac{3}{11}$ of $\frac{2}{5}$ or $\frac{4}{7}$ of $\frac{5}{8}$?



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16. In a group of 40 guests at a party, $\frac{1}{5}$ of the total number of guests opted for tomato soup, $\frac{1}{4}$ of the guests chose to have vegetable soup, and the rest had fruit juice. Find the number of guests who had:

a. tomato soup



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17. In a group of 40 guests at a party, $\frac{1}{5}$ of the total number of guests opted for tomato soup, $\frac{1}{4}$ of the guests chose to have vegetable soup, and the rest had fruit juice. Find the number of guests who had:

b. vegetable soup



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18. In a group of 40 guests at a party, $\frac{1}{5}$ of the total number of guests opted for tomato

soup, $\frac{1}{4}$ of the guests chose to have vegetable soup, and the rest had fruit juice. Find the number of guests who had:

c. fruit juice



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19. Find the reciprocal of: $1. \frac{2}{9}$



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20. Find the reciprocal of: $2. 7$



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21. Find the reciprocal of: $3.5\frac{3}{5}$



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22. Find the reciprocal of: $\frac{11}{4}$



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23. Find the reciprocal of: 0



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24. Evaluate: a. $\frac{3}{7} \div 9$



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25. Evaluate: b. $4 \div \frac{16}{21}$



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26. Evaluate: c. $28 \div 1\frac{3}{11}$



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27. Evaluate: d. $6\frac{2}{3} \div 36$



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28. Evaluate: e. $\frac{4}{9} \div \frac{5}{6}$



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29. Evaluate: f. $\frac{5}{8} \div \frac{3}{64}$



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30. Evaluate: g. $\frac{13}{14} \div 5\frac{4}{7}$



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31. Evaluate: h. $6\frac{7}{8} \div \frac{11}{24}$



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32. The price of one orange is Rs. $13\frac{1}{4}$. Divya buys oranges for Rs. $185\frac{1}{2}$. How many oranges did she buy?



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33. Evaluate: a. $\frac{9}{5} - \left(\frac{6}{7} \div \frac{10}{21}\right)$



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34. Evaluate: b. $\frac{3}{4}$ of $\left(4\frac{1}{5} \times \frac{10}{7}\right)$



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35. Evaluate: c. $5\frac{1}{4} \times 3\frac{5}{6} + 1\frac{3}{5} \div 5\frac{1}{3}$



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36. Evaluate: d. $\left(\frac{5}{3} \times \frac{9}{20}\right) - \left(\frac{7}{9} \div \frac{28}{15}\right)$



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37. Naman has to serve $2\frac{3}{4}$ litres of soft drink in cups of $\frac{1}{8}$ litre. How many cups can he serve? Will there be any soft drink left over?



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Warm Up Exercise

1. Write the following divisions as fractions.

a. $537 \div 1000 = \underline{\hspace{2cm}}$



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2. Write the following divisions as fractions.

b. $15 \div 8 =$ _____



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3. Write the following fractions as divisions.

a. $\frac{3}{13} =$ _____



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4. Write the following fractions as divisions.

b. $\frac{343}{100} = \text{-----}$



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5. What fraction is 300 mL of 1 L?



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6. Which of the following are proper and improper fractions?

a. $\frac{4}{3}$



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7. Which of the following are proper and improper fractions?

b. $\frac{8}{9}$



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8. Which of the following are proper and improper fractions?

c. $\frac{6}{6}$



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9. Which of the following are proper and improper fractions?

d. $\frac{0}{12}$



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10. Write as mixed fraction:

a. $\frac{24}{5}$



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11. Write as mixed fraction:

b. $\frac{36}{7}$



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12. Find an equivalent fraction of $\frac{3}{4}$ with:

a. denominator 20.



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13. Find an equivalent fraction of $\frac{3}{4}$ with:

b. numerator 12.



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14. Evaluate: $\frac{21}{60} = \frac{x}{40}$



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15. Reduce $\frac{96}{128}$ to its simplest form.



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16. Express as like fractions: $\frac{5}{18}$, $\frac{7}{12}$, $\frac{5}{6}$



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17. Compare the fractions:

a. $\frac{12}{17} \square \frac{6}{11}$



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18. Compare the fractions:

b. $\frac{7}{9} \square \frac{13}{15}$



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19. Compare the fractions:

c. $\frac{8}{14} \square \frac{48}{84}$



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20. Arrange $\frac{9}{11}$, $\frac{9}{7}$, $\frac{9}{15}$, $\frac{9}{13}$, $\frac{9}{5}$ in ascending order.



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21. Evaluate: a. $\frac{12}{17} + \frac{8}{17}$



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22. Evaluate: b. $2\frac{5}{9} + 3\frac{7}{15}$



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23. Evaluate: c. $4\frac{11}{15} - 2\frac{7}{20}$



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24. Ajay had 3 bars of chocolate. He gave $1 - \frac{1}{4}$ to his sister. How much chocolate is left with him?



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Exercise 2 1

1. Evaluate: a. $8\frac{2}{7} + 11\frac{5}{7} + 2\frac{1}{7}$



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2. Evaluate: b. $5\frac{6}{7} - 2\frac{5}{6} - 1\frac{2}{3}$



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3. Evaluate: c. $2\frac{3}{14} + 5\frac{2}{7} - 4\frac{3}{4}$





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4. Evaluate: d. $7\frac{9}{5} - 2\frac{2}{5} - 1\frac{4}{5}$



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5. Evaluate: e. $7\frac{1}{6} + 8\frac{4}{5} - 9\frac{2}{3}$



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6. Evaluate: f. $12\frac{1}{2} - 3\frac{9}{14} + 4\frac{5}{7}$





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7. What should be subtracted from

$$\left(\frac{5}{14} + \frac{3}{7} \right) \text{ to get } \frac{1}{5}?$$



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8. From what should $\left(\frac{3}{7} + \frac{4}{21} \right)$ be

subtracted to get $\frac{5}{6}$?



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9. Simran put $\frac{7}{6}$ kg of sweets, 2 kg of milk, and $1\frac{2}{3}$ kg of fruits in her bag. How much did her bag weigh now?

A. $4\frac{4}{5}$ kg

B. $4\frac{2}{9}$ kg

C. $4\frac{5}{6}$ kg

D. $4\frac{3}{7}$ kg

Answer: C



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10. Monica is taking tennis lessons. She practiced for $6\frac{8}{9}$ hours in the first week and $7\frac{5}{6}$ hours in the second week. Find the total number of hours she practiced.

A. $19\frac{13}{18}$ hr

B. $13\frac{11}{18}$ hr

C. $12\frac{15}{19}$ hr

D. $14\frac{13}{18}$ hr

Answer: D



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11. Monica is taking tennis lessons. She practised for $6\frac{8}{9}$ hours in the first week and $7\frac{5}{6}$ hours in the second week. Find:

b. the week in which she practised more and by how much?



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12. A centipede was crawling in a straight line. First it crawled for $8\frac{3}{7}$ inch, then it crawled in

the reverse direction for $5\frac{5}{8}$ inch. Once again it reversed direction and crawled for $11\frac{1}{2}$ inch in the original direction. How far away was it finally from the starting point?



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13. Anjali had read $\frac{2}{3}$ of the book when she sat in her school bus. $\frac{1}{4}$ of the book was left when she got off from the bus. How much did she read in the bus?



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14. Meghna bought $6\frac{1}{2}$ m of cloth for making curtains and $4\frac{2}{5}$ m of cloth for making table cloth. How much cloth did she purchase in all?

When she reached home she saw $3\frac{3}{4}$ m of cloth for curtains was spoiled and $2\frac{1}{5}$ m of table cloth was torn. How much cloth was she left with each for making curtains and table cloth?



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Exercise 2 2

1. Evaluate: a. $21 \times \frac{45}{49}$



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2. Evaluate: b. $4\frac{5}{7} \times 3$



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3. Evaluate: c. $\frac{14}{25} \times \frac{20}{49}$





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4. Evaluate: d. $3\frac{5}{8} \times \frac{24}{49}$



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5. Evaluate: e. $3\frac{7}{9} \times 1\frac{11}{25}$



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6. Evaluate: f. $3 \times 7\frac{3}{7} \times 3\frac{3}{13}$





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7. Evaluate: g. $5\frac{1}{3} \times 8\frac{1}{4} \times 2\frac{3}{5}$



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8. Evaluate: h. $\frac{5}{16} \times 1\frac{13}{35} \times 1\frac{1}{15}$



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9. Find : a. $\frac{2}{6}$ of 3 kg 600 g





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10. Find : b. $\frac{5}{6}$ of 1 week 4 days



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11. Fill in $<$ or $>$ sign in the boxes without actually carrying out the multiplication.

a. i. $\frac{3}{11} \times \frac{2}{9} \square \frac{2}{9}$

ii. $\frac{3}{11} \times \frac{2}{9} \square \frac{3}{11}$



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12. Fill in $<$ or $>$ sign in the boxes without actually carrying out the multiplication.

b.

$$\frac{9}{5} \times \frac{8}{13} \square \frac{9}{5}$$

i.

$$ii. \frac{9}{5} \times \frac{8}{13} \square \frac{8}{13}$$



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13. Fill in $<$ or $>$ sign in the boxes without actually carrying out the multiplication.

$$i. \frac{11}{3} \times \frac{6}{5} \square \frac{11}{3}$$

$$\frac{11}{3} \times \frac{6}{5} \square \frac{6}{5}$$



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14. a. What fraction is 300 mL of $1\frac{1}{2}$ litres?

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15. b. What fraction of $2\frac{1}{2}$ days is 12 hours?

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16. Which is greater: $\frac{5}{6}$ of $\frac{3}{4}$ or $\frac{3}{12}$ of $\frac{11}{9}$?

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17. Write the reciprocal of: a. $\frac{5}{8}$



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18. Write the reciprocal of: b. $\frac{17}{7}$



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19. What kind of a fraction is the reciprocal of an improper fraction?



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20. Can any fraction have a natural number as its reciprocal?



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21. A number when divided by $3\frac{45}{49}$ gives $\frac{7}{24}$.
Find number.



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22. A children's park is in shape of a rectangle with length $4\frac{1}{3}$ m and width $3\frac{6}{7}$ m. Find its area.



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23. A train is moving at a speed of $55\frac{1}{5}$ km/h. The train travels at the same speed for 6 hours 40 minutes. What is the distance covered by the train?





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24. Mohit uses $\frac{1}{8}$ of his ink cartridge every day.

How much cartridge will he use in the months of July and August?



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25. Ashu cleaned $\frac{1}{3}$ of the room in 1 hour.

What part of the room will he clean in $2\frac{2}{3}$ hours?



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26. Madhav and Daksh bought 4 litres of orange juice. Madhav drank $\frac{2}{5}$ of the juice and Daksh finished the rest. How many litres of juice did Daksh drink?



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Exercise 2 3

1. Find: a. $30 \div \frac{45}{11}$



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2. Find: b. $20\frac{5}{6} \div 15$



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3. Find: c. $\frac{16}{25} \div \frac{36}{15}$



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4. Find: d. $\frac{4}{25} \div \frac{16}{35}$



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5. Find: e. $\frac{21}{32} \div 1\frac{14}{35}$



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6. Find: f. $1\frac{13}{5} \div 1\frac{5}{7}$



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7. Simplify : a. $\left(\frac{4}{7} \div \frac{36}{49}\right) - \frac{1}{2}$



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8. Simplify : b. $\frac{5}{9} \div \left(\frac{3}{10} \times \frac{5}{12} \right)$



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9. Simplify : c. $\frac{3}{5}$ of $\left(\frac{1}{15} \times 3\frac{2}{5} \right)$



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10. Simplify : d. $\frac{1}{6}$ of $\left(1\frac{1}{9} \div 7\frac{1}{2} \right)$



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11. Simplify : e. $5\frac{1}{3} \times \frac{3}{8} - \frac{7}{9} \div 2\frac{1}{10}$



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12. Simplify : f. $\frac{13}{7} + 4\frac{4}{5} \times \frac{3}{4} \div \frac{7}{15}$



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13. Simplify : g. $\left(\frac{3}{8} \times \frac{2}{15}\right) + \left(\frac{4}{9} \div \frac{32}{27}\right)$



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14. Simplify : $\left(\frac{6}{7} \div \frac{2}{5}\right) + \left(\frac{5}{9} \div \frac{27}{25}\right)$



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15. Simplify : i. $\left(1\frac{5}{7} \times \frac{7}{10}\right) - \left(\frac{3}{5} \div \frac{9}{10}\right)$



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16. Simplify : j. $\left(\frac{21}{10} \times \frac{2}{14}\right) - \left(\frac{1}{7} \div \frac{36}{28}\right)$



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17. Amit buys chocolates worth Rs. $97\frac{1}{2}$. If one chocolate costs Rs. $9\frac{3}{4}$, how many chocolates did he buy?



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18. One banana costs Rs. $5\frac{3}{4}$. How many bananas can be bought for Rs. $97\frac{3}{4}$?



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19. A box of candies weighs $640\frac{1}{2}$ g. If each candy weighs $45\frac{3}{4}$ g, how many candies are there in the box?



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20. Suraj has to distribute 9 kg of sweets into 40 boxes. Find the quantity of sweets in each box in grams.



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21. Suman covers $2\frac{4}{5}$ km in $\frac{7}{12}$ hours.

a. How much time is required to cover $6\frac{1}{5}$ km?



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22. Suman covers $2\frac{4}{5}$ km in $\frac{7}{12}$ hours.

b. How much will Suman cover in $1\frac{1}{5}$ hours?



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23. The product of two numbers is $3\frac{1}{3}$. If one number is $3\frac{3}{5}$, find the other.



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24. Anjali covers $43\frac{1}{2}$ km in $7\frac{1}{4}$ hours and Nisha covers $27\frac{5}{8}$ km in $4\frac{1}{4}$ hours. Who walks faster. Who walks faster and by how much?



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25. Kiran knits $2\frac{3}{4}$ pullovers in $14\frac{2}{3}$ hours and Anu knits $4\frac{1}{2}$ pullovers in $19\frac{1}{2}$ hours. Who is faster at knitting a pullover?



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Revision Exercise

1. Find :

a. $4\frac{5}{13} - 3\frac{7}{13} + 2\frac{8}{13}$



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2. Find :

$$\text{b. } 7\frac{5}{6} + 4\frac{2}{5} - 6\frac{2}{15}$$



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3. Multiply:

$$\text{a. } 4 \times \frac{11}{36}$$



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4. Multiply:

b. $5 \times \frac{3}{5}$



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5. Multiply:

c. $5\frac{1}{3} \times 2$



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6. Multiply:

$$d. \frac{8}{25} \times \frac{5}{16}$$



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7. Multiply:

$$e. \frac{9}{16} \times \frac{48}{63}$$



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8. Multiply:

$$\text{f. } 6\frac{2}{5} \times \frac{15}{64}$$



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9. Divide:

$$\text{a. } \frac{7}{9} \div 14$$



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10. Divide:

b. $13 \div \frac{39}{40}$



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11. Divide:

c. $33 \div 3\frac{2}{3}$



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12. Divide:

d. $6\frac{3}{8} \div 17$



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13. Divide:

e. $\frac{4}{8} \div \frac{9}{24}$



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14. Divide:

$$\text{f. } 4\frac{2}{7} \div 2\frac{2}{5}$$



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15. Divide:

$$\text{g. } 2\frac{4}{7} \div \frac{45}{14}$$



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16. Divide:

$$\text{h. } \frac{11}{13} \div 1\frac{1}{26}$$



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17. Evaluate: a. $\left(\frac{2}{5} \times \frac{15}{16}\right) - \left(\frac{6}{11} \div \frac{54}{33}\right)$



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18. Evaluate: b. $\left(\frac{6}{7} \times \frac{35}{48}\right) + \left(\frac{5}{6} \div \frac{15}{16}\right)$



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19. What should be added to $\left(\frac{5}{6} - \frac{7}{8}\right)$ to get $\frac{1}{2}$?



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20. What should be subtracted from $\left(\frac{9}{10} + \frac{13}{20}\right)$ to get $\frac{1}{12}$?



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21. Find $\frac{2}{3} - \frac{3}{4}$.



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22. Find $\frac{2}{3}$ of : b. $3\frac{1}{7}$



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23. Find $\frac{2}{3}$ of : c. $5\frac{2}{5}$



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24. Find $\frac{2}{3}$ of : $2\frac{3}{8}$



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25. Find: a. $\frac{3}{5}$ of 4` m



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26. Find: b. $\frac{3}{4}$ of 5 kg



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27. Find: c. $\frac{2}{5}$ of Rs. 11



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28. What fraction is 1 kg 440 g of 2 kg 400 g?



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29. A proper and an improper fraction are multiplied. Compare the product with the two fractions.



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30. Compare the following without evaluating the product:

a. i. $\frac{3}{5} \times \frac{7}{9} \square \frac{3}{5}$

ii. $\frac{3}{5} \times \frac{7}{9} \square \frac{7}{9}$



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31. Compare the following without evaluating the product:

b.

$$\frac{12}{7} \times \frac{8}{5} \square \frac{12}{5}$$

i.

$$ii. \frac{12}{7} \times \frac{8}{5} \square \frac{8}{5}$$



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32. Find the reciprocal of : a. $\frac{12}{15}$



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33. Find the reciprocal of : b. 1



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34. Find the reciprocal of : c. 11



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35. Find the reciprocal of : d. $4\frac{5}{8}$



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36. Find the reciprocal of : e. $\frac{22}{7}$



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37. A fruit juice seller has $12\frac{5}{7}$ litres of juice in a container. He sells $9\frac{5}{6}$ litres of juice. He then refills the container with $8\frac{1}{4}$ litres of juice. How much juice is there in the container now?

A. $11\frac{11}{84}$

B. $9\frac{11}{74}$

C. $13\frac{13}{84}$

D. $11\frac{23}{84}$

Answer: A



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38. Preeti selects a dress material costing Rs. $35\frac{1}{2}$ per metre. She needs 5 m of the material.

How much does she have to pay?



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39. A square is of side $3\frac{3}{4}$ m. Find the area of the square.



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40. Sarita had Rs. 10, 500. She gave $\frac{3}{5}$ of it to her friend Geeta. How much money is left with her?



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41. The area of a rectangle is $78\frac{2}{9}$ square metres. If its length is $10\frac{2}{3}$ m, find its breadth.



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42. A juice can contains $22\frac{2}{3}$ litres of juice. How many jugs of capacity $1\frac{1}{3}$ litres are required to empty the can?



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43. A car moves at a speed of $57\frac{3}{4}$ km/hr. The car travels for 3 hours 20 minutes. Find the distance covered by the car.



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44. A man sells $3\frac{1}{2}$ bags of potatoes for Rs. $65\frac{2}{5}$. How much will he earn if he sells $8\frac{3}{4}$ bags of potatoes?



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Challenge

1. There are 1089 students in a school. One-ninth of the students wear exactly one glove. Half of the others do not wear any gloves. How many gloves are being used by the students?



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