



MATHS

BOOKS - PEARSON IIT JEE FOUNDATION

FRACTIONS AND DECIMALS

Examples

1. Compare $\frac{2}{5}$ and $\frac{13}{35}$.

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2. Convert $\frac{13}{9}$ into a mixed fraction.



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3. Convert $8\frac{2}{5}$ into a improper fraction.



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



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5. Simplify: $\frac{4}{9} + \frac{1}{3} - \frac{3}{4}$

A. $\frac{1}{37}$

B. $\frac{2}{27}$

C. $\frac{1}{36}$

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

Answer: C



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6. Simplify: $1' \frac{1}{11} \times 3' \frac{1}{11} \div 4' \frac{7}{11}$



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7. Find the sum of 1.4 and 2.23.

A. 3.63

B. 5.53

C. 2.89

D. 7.23

Answer: A



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8. Find the difference of 47.16 and 39.17.



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9. Convert $\frac{24}{25}$ into a decimal fraction.



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10. Simplify: 27.47×10



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11. Divide 8.4 by 6.



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12. Compare $\frac{2}{5}$ and $\frac{13}{35}$.



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13. Convert $\frac{13}{9}$ into a mixed fraction.



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14. Convert $8\frac{2}{5}$ into a improper fraction.



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



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16. Simplify: $\frac{4}{9} + \frac{1}{3} - \frac{3}{4}$



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17. Simplify: $1\frac{1}{11} \times 3\frac{1}{11} \div 4\frac{7}{11}$

A. $\frac{8}{13}$

B. $\frac{4}{11}$

C. $\frac{8}{11}$

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

Answer: C



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18. Find the sum of 1.4 and 2.23.



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19. Find the difference of 47.16 and 39.17.



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20. Convert $\frac{24}{25}$ into a decimal fraction.



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21. Simplify: 27.47×10



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22. Divide 8.4 by 6.



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Exercise Very Short Ans Type

1. $\frac{4}{3}$ is a/an _____ (proper/improper) fraction.



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2. $\frac{4}{3}$ is a/an _____ (proper/improper) fraction.



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Very Short Ans Type

1. $5/5$ is a/an _____ (proper/improper) fraction.



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2. $6/7$ is a/an _____ (proper/improper) fraction.



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3. Convert $9/2$ as a mixed fraction, the answer is _____.



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4. The fraction $744/496$ in its lowest terms is _____.



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5. If $\frac{3}{4} = \frac{k}{12}$, then k is _____

A. 3

B. 4

C. 6

D. 9

Answer: D



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6. $\frac{7}{9}$ is equivalent to _____

A. $\frac{14}{18}$

B. $\frac{35}{45}$

C. $\frac{56}{72}$

D. All of these

Answer: D



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7. $13\frac{4}{5} = \underline{\hspace{2cm}}$

A. $65/5$

B. $72/5$

C. $69/5$

D. $17/5$

Answer: C



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8. What part of the given figure is shaded ?

What part of the given figure is shaded?



(a) $\frac{2}{3}$

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

(c) $\frac{1}{2}$

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

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

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

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

D. $\frac{2}{5}$

Answer: B



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9. Which of the following is the largest -

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

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

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

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

Answer: A



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10. $\frac{5}{5}$ is a/an _____ (proper/improper) fraction.



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11. $6/7$ is a/an _____ (proper/improper) fraction.



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12. Convert $9/2$ as a mixed fraction, the answer is _____.



Watch Video Solution

13. The fraction $744/496$ in its lowest terms is _____.



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14. If $\frac{3}{4} = \frac{k}{12}$, then k is _____

A. 3

B. 4

C. 6

D. 9

Answer: D



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15. $\frac{7}{9}$ is equivalent to _____

A. $\frac{14}{18}$

B. $\frac{35}{45}$

C. $\frac{56}{72}$

D. All of these

Answer: *D*



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16. $13\frac{4}{5} = \underline{\hspace{2cm}}$

A. $65/5$

B. $72/5$

C. $69/5$

D. $17/5$

Answer: C



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17. What part of the given figure is shaded ?



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

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

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

D. $\frac{2}{5}$

Answer: B



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18. Which of the following is the largest ?

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

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

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

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

Answer: A



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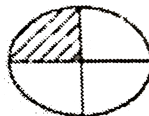
19. Match the Column A with Column B.

Column A (Fraction of shaded part)	Column B
---------------------------------------	----------

(a) $\frac{1}{2}$

()

(p)



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

()

(q)



(c) $\frac{1}{4}$

()

(r)



(d) $\frac{3}{4}$

()

(s)



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20. $\frac{1}{2} + \frac{3}{4} = \underline{\hspace{2cm}}$



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21. $\frac{3}{8} \div \frac{2}{3} = \underline{\hspace{2cm}}$



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22. $\frac{2}{5}$ of $3\frac{4}{7} = \underline{\hspace{2cm}}$



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23. $\left[\frac{2}{7} + \frac{4}{7} \right] \times \left[4\frac{2}{3} \right] = \underline{\hspace{2cm}}$



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24. $\left(2\frac{2}{5}\right)\left(1\frac{2}{3}\right) = \underline{\hspace{2cm}}$



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25. Sujith travels one-third of a distance. If the distance is 12 km, then find the remaining distance that he would have travelled (in m).

A. 2

B. 4

C. 6

D. 8

Answer: *D*



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26. Total strength of a class is 36 students. If three-fourth of the students is taking an examination from the class, then how many students are not taking the examination ?

A. 9

B. 12

C. 28

D. 27

Answer: A



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27. Anil travels from place A to place B and Akhil travels from place A . Anil travels one-third of the distance and Akhil travels one-fourth of the distance. The distance travelled by Anil is 01 km more than the distance travelled by Akhil. What is the distance between place A and place B ? (In km)

A. 9

B. 10

C. 12

D. 18

Answer: C



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28. $\frac{1}{2} + \frac{3}{4} + \frac{1}{8} = \underline{\hspace{2cm}}$.

A. $3/2$

B. $5/4$

C. $9/8$

D. $11/8$

Answer: *A*



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29. $\frac{2}{3} \div \frac{4}{3} \times \frac{2}{3} + 1 = \underline{\hspace{2cm}}$

A. $7/3$

B. $4/3$

C. $3/10$

D. $6/17$

Answer: B



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30. Match the Column A with Column B.

- | Column A | | Column B |
|--|-----|--|
| (a) $\left(\frac{1}{2} + \frac{1}{3}\right)$ of 6 | () | (p) $\left(\frac{3}{4} - \frac{1}{3}\right)$ of 12 |
| (b) $\left(\frac{1}{3} + \frac{1}{6}\right)$ of 18 | () | (q) $\left(\frac{5}{2} - \frac{2}{3}\right)$ of 6 |
| (c) $\left(\frac{1}{4} + \frac{1}{3}\right)$ of 12 | () | (r) $\left(\frac{5}{4} - \frac{1}{2}\right)$ of 12 |
| (d) $\left(\frac{1}{5} + \frac{1}{6}\right)$ of 30 | () | (s) $\left(\frac{3}{4} - \frac{1}{6}\right)$ of 12 |



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31. $23.143 + 17.159 = \underline{\hspace{2cm}}$.

A. 40.202

B. 40.322

C. 40.302

D. 40.312

Answer: C



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$$32.36.121 - 33.429 = \underline{\hspace{2cm}}.$$



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$$33.0.00125 \times 200 = \underline{\hspace{2cm}}.$$



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34. $50.2 \div 1.255 = \underline{\hspace{2cm}}$



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35. $2.3 + 4.4 + 6.9 = \underline{\hspace{2cm}}$



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36. $\frac{120}{25} = \underline{\hspace{2cm}}$

A. 0.048

B. 4.8

C. 48

D. 4.08

Answer: b



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37. $1.36 = \underline{\hspace{2cm}}$.

A. $\frac{24}{25}$

B. $\frac{14}{25}$

C. $\frac{32}{25}$

D. $\frac{34}{25}$

Answer: d



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$$38.18 - 13.169 = \underline{\hspace{2cm}}$$

A. 3.831

B. 4.831

C. 5.831

D. 2.831

Answer: B



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39. $37.23 \div 10 = \underline{\hspace{2cm}}$

A. 372.3

B. 3.723

C. 37.23

D. 0.3723

Answer: B



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40. $1.608 \div 1.34 = \underline{\hspace{2cm}}$

A. 3.2

B. 2.2

C. 1.2

D. 4.2

Answer: C



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41. Match the following Column A to Column B

Column A		Column B	
(a) 0.456×0.3	()	(p) 0.1468	
(b) 0.734×0.2	()	(q) 0.1368	
(c) 0.0739×2	()	(r) 0.1478	
(d) 0.0689×2	()	(s) 0.1378	



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Short Answer Type Qns

1. List out the proper and improper fractions from the following .

(a) $7/2$, (b) $3/4$, (c) $5/2$

(d) $11/13$, (e) $7/15$, (f) $17/13$

(g) $72/21$, (h) $81/87$, (i) $16/15$

(j) $20/29$



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2. Compare

(i) $27/4$ and $31/50$

(ii) $\frac{4}{5}$ and $\frac{7}{8}$



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3. Arrange the following fractions in ascending order and descending order.

(i) $\frac{7}{9}, \frac{13}{15}, \frac{23}{27}, \frac{20}{21}$

(ii) $\frac{4}{5}, \frac{11}{20}, \frac{11}{15}, \frac{22}{25}$



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4. Convert $\frac{6}{5}$ and $\frac{12}{7}$ as mixed fractions ?



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5. Convert (i) $1\frac{3}{4}$ and (ii) $3\frac{4}{5}$ as improper fraction.



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6. Reduce $1562/1846$ and $924/1188$ in lowest terms.



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7. Three friends A, B and C have some money. If A has $3/10$ of the total money, B has $7/15$ of the total money and C has $7/30$ of the total money. Who has the biggest share of the money? If the total money is ₹ 1500, then how much money does A have ?



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8. There are 125 balls in a basket. Out of which, 15 are white, 25 are brown, 35 are green, and the remaining are pink in colour. Find the share of the balls for each colour in the basket.

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9. What should be added to the sum of $\frac{1}{8}$ and $\frac{1}{7}$ so that the sum is $\frac{5}{14}$?

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10. What should be subtracted from the sum of $1/12$ and $1/8$ so that the difference is $1/18$?



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11. Simplify:

$$\frac{1}{2} \div \frac{4}{3} \times \frac{2}{3} \div \frac{1}{2} + \frac{3}{4} - \frac{5}{2} + \frac{2}{3} \times \frac{9}{4} \div \frac{2}{3}$$



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12. Simplify :

$$2' \frac{1}{2} - \left[2 + \left\{ \frac{1}{9} \left[\frac{1}{2} + \frac{1}{2} + \frac{1}{2} \right] + \frac{1}{2} \right\} \times 3 \right] + 2' \frac{1}{4} \times \frac{2}{3}$$



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13. Simplify :

$$1' \frac{2}{15} + 2' \frac{2}{15} + 3' \frac{2}{15} + \dots + 100' \frac{2}{15}$$



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14. Simplify: $1' \frac{1}{11} + 2' \frac{2}{11} + 3' \frac{3}{11} + \frac{4}{11} + \frac{5}{11} + \frac{6}{11}$



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15. Joshna and Vijay have some chocolates, The number of chocolates with Joshna is two -third of the number of chocolates with Vijay. If Vijay gives five chocolates to

Joshna, then both will have equal number of chocolates.

How many chocolates does Joshna have ?



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16. Priyanka spends $\frac{2}{15}$ of her income on clothes, $\frac{1}{9}$ of her income on entertainment, $\frac{4}{15}$ of her income on rent, $\frac{1}{3}$ of income on food and she saves the remaining amount of ₹ 10, 500. What is the income of Priyanka ?



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17. A rope of length $18\frac{1}{2}$ m is cut into equal pieces of $1\frac{7}{30}$ m each. Find the number of pieces.



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18. Convert $7/20$ into a decimal fraction.



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19. Convert 0.425 into a fraction.



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20. Simplify : $128.364 + 10.08 - 132.16 + 9.8$



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21. Simplify :

$$0.9 + 0.9 \times 0.9 \div 0.9 - 0.9 + 0.9 \div 0.9 \times 0.9$$



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22. What should be added to 1.834 so that the sum is 5 ?



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23. What should be subtracted from the sum of 1.48 and 1.368 so that the difference is 1 ?



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24. By how much is the sum of 44.44 and 32.03 greater than their difference ?



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25. How many glasses of water are required to fill one litre water bottle, if one glass of water is 25 mL.



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26. Ram purchased 3 notebooks that each costs ₹ 20.75 and 4 pencil that each costs ₹4.25. Ram gave ₹ 100 to the shopkeeper. How much money should Ram get back from the shopkeeper ?



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Concept Application

1. A person earns ₹ 54000 per month. He spends $\frac{2}{15}$ of his earnings on house rent, $\frac{4}{9}$ of his earnings on other household items and saves and remaining. What fraction of amount is the savings in his earnings ?

A. $\frac{19}{45}$

B. $\frac{17}{45}$

C. $\frac{13}{24}$

D. $\frac{11}{25}$

Answer: A



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2. The cost of the dozen oranges is ₹ $43\frac{1}{1}$. Find the cost of $2\frac{1}{3}$ dozen of oranges (in ₹).

A. 203

B. $\frac{203}{2}$

C. $\frac{101}{2}$

D. $100\frac{1}{2}$

Answer: B



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3. A water bottle is $\frac{3}{5}$ and $\frac{1}{7}$ of the water is drawn. How much water is remaining in the bottle ?

A. $\frac{16}{35}$

B. $\frac{17}{35}$

C. $\frac{8}{17}$

D. $\frac{2}{35}$

Answer: A



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4. The length of a rope is 23.25 m. If two pieces of lengths 6.42 m and 3.09 m are cut, then find the length of the remaining rope.

A. 12.74

B. 13.64

C. 13.74

D. 14.54

Answer: C

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5. The weight of a piece of gold is 0.2354 kg and the cost of gold is ₹2875.50 per gram. If 9.56 gm is separated for an ornament, then find the cost of remaining gold ?

A. 646577.42

B. 646627.42

C. 646587.42

D. 649402.92

Answer: D

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Assessment Test

1. Compare $\frac{2}{3}$ and $\frac{4}{5}$.



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2. Compare $2\frac{3}{4}$ and $2\frac{19}{25}$.



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3. Arrange $\frac{2}{7}$, $\frac{4}{5}$ and $\frac{3}{4}$ in ascending order.



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4. Simplify : (i) $\frac{2}{3} + \frac{4}{5}$, (ii) $\frac{7}{9} + \frac{11}{18}$



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5. Simplify : (i) $\frac{7}{2} - \frac{3}{4}$, (ii) $\frac{8}{11} - \frac{2}{3}$



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6. Simplify : $4' \frac{1}{6} \left[\frac{1}{3} - \left\{ \frac{1}{4} - \frac{2}{5} \right\} + \frac{1}{3} \div \frac{25}{24} \right]$



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7. (i) $4.2 + 0.27$

(ii) $32.45 + 45.69$



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8. (i) Subtract 9.133 from 13.012.

(ii) Subtract 3.2 from 5.15.



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9. (i) Find the value of 1.238×10 .

(ii) Find the value of 1.31×1.2 .



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10. Reduce $480 / 840$ to its simplest form.



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11. Arrange the following fraction in ascending order.

$2/5, 3/5, 4/5, 5/5, 6/5$



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12. Arrange the following in descending order.

$5/2, 5/3, 5/4, 5/5, 5/6$



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13. By how much is difference of 18.89 and 11.21 less than that of their sum ?



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14. What should be added to 6.77 to get ?



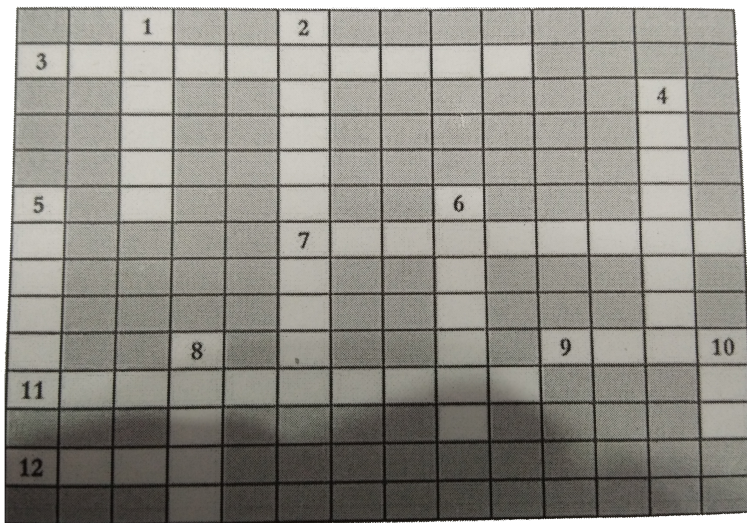
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15. What should be added to the difference of 6.88 and 4.25 to get 5 ?



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Crossword



1.

Across

3. The second place to the right hand side of the decimal point
7. In x/y , x is called
9. The sum of $-17/5$ and $17/5$ is
11. x/y and y/x are said to be ___ to each other.
12. Fractions whose denominators are same.

Down

1. Fractions whose denominators are different
2. In x/y , y is called
4. A fraction whose denominator is less than the numerator.
5. A fraction whose denominator is more than the numerator.
6. A fraction whose denominator is 10, 100, 1000
8. A fraction which is a combination of a whole number and a proper fraction.
10. The product of $3/8$ and $8/3$.



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