

MATHS

BOOKS - BETOPPERS

RATIO AND PROPORTION

Formative Worksheet

1. There are 20 girls and 15 boys in a class.

What is the ratio of number of girls to the number of boys ?



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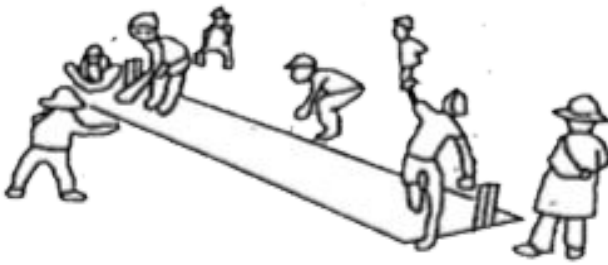
2. There are 20 girls and 15 boys in a class.

What is the ratio of number of girls to the total number of students in the class?



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3. Out of 30 students in a class, 6 like football, 12 like cricket and remaining like tennis.



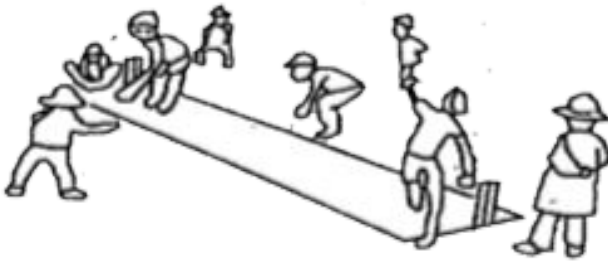
Find the ratio of :

Number of students liking football to number of students liking tennis.



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4. Out of 30 students in a class, 6 like football, 12 like cricket and remaining like tennis.



Find the ratio of :

Number of students liking cricket to total number of students.

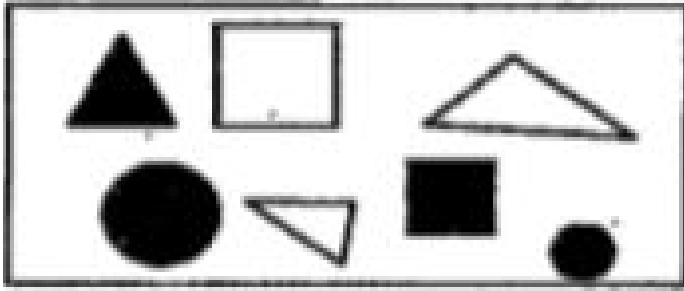


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5. See the figure and find the ratio of :

Number of triangles to the number of circles

inside the rectangle.

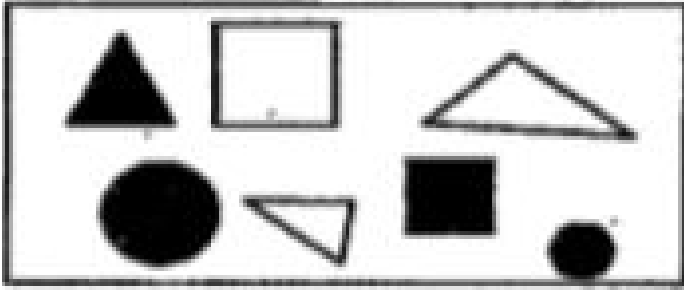


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6. See the figure and find the ratio of :

Number of squares to all the figures inside the

rectangle.

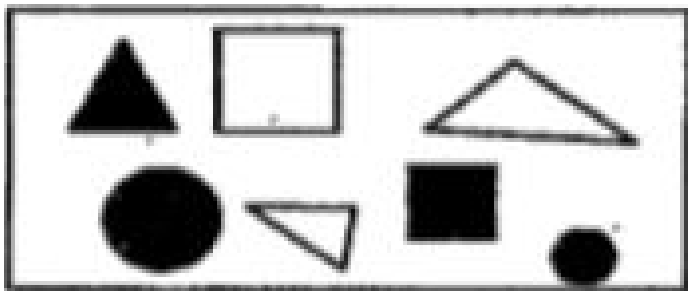


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7. See the figure and find the ratio of :

Number of circles to all the figures inside the

rectangle.



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8. Distance travelled by Hamid and Akhtar in an hour are 9 km and 12 km. Find the ratio of speed of Hamid to the speed of Akhtar.



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9. Fill in the following blanks

$$\frac{15}{18} = \frac{\square}{6} = \frac{10}{\square} = \frac{\square}{30}$$

[Are these equivalent ratios?]



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10. Find the ratio of the following :

81 to 108



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11. Find the ratio of the following :

98 to 63



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12. Find the ratio of the following :

33 km to 121 km



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13. Find the ratio of the following :

30 minutes to 45 minutes



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14. In a year, Seema earns Rs. 1,50,000 and saves Rs. 50,000. Find the ratio of :

Money that Seema earns to the money she saves.



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15. In a year, Seema earns Rs. 1,50,000 and saves Rs. 50,000. Find the ratio of :

Money that she saves to the money she spends.



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16. Out of 1800 students in a schools, 750 opted basketball, 800 opted cricket and remaining opted table tennis. If a student can only one game, find the ratio of :

Number of students who opted basketball to
number of students who opted table tennis.



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17. Out of 1800 students in a schools, 750
opted basketball, 800 opted cricket and
remaining opted table tennis. If a student can
only one game, find the ratio of :

Number of students who opted cricket to the
number of students who opted basketball.



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18. Out of 1800 students in a schools, 750 opted basketball, 800 opted cricket and remaining opted table tennis. If a student can only one game, find the ratio of :

Number of students who opted basketball to the total number of students.



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19. Consider the statement: Ratio of breadth and length of a hall is 2 : 5. Complete the

following table that shows some possible breadth and lengths of the hall.

Breadth of the hall (in metres)	10	<input type="text"/>	40
Length of the hall (in metres)	25	50	<input type="text"/>



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20. Present age of father is 42 years and his son is 14 years. Find the ratio of :

Present age of father to the present age of son.



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21. Present age of father is 42 years and his son is 14 years. Find the ratio of :

Age of the father to the age of son, when son was 12 years old.



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22. Present age of father is 42 years and his son is 14 years. Find the ratio of :

Age of father after 10 years to the age of son after 10 years.





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23. Present age of father is 42 years and his son is 14 years. Find the ratio of :

Age of father to the age of son when father was 30 years old.



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24. Determine if the following are in proportion :

15: 45, 40: 120



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25. Determine if the following are in proportion :

33:121, 9:96



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26. Determine if the following are in proportion :

24: 28, 36:48



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27. Determine if the following are in proportion :

32:48, 70 :21



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28. Determine if the following are in proportion :

4: 6, 8 :12



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29. Determine if the following are in proportion :

33: 44, 75 :100



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30. Write True (T) or False (F) against each of the following statements.

16 : 24 :: 20 : 30



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31. Write True (T) or False (F) against each of the following statements.

$$21 : 6 :: 35 : 10$$



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32. Write True (T) or False (F) against each of the following statements.

$$12 : 18 :: 28 : 12$$



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33. Write True (T) or False (F) against each of the following statements.

$$8 : 9 :: 24 : 27$$



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34. Write True (T) or False (F) against each of the following statements.

$$5.2 : 3.9 :: 3 : 4$$



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35. Write True (T) or False (F) against each of the following statements.

$$0.9 : 0.36 :: 10 : 4$$



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36. Are the following statements true ?

$$40 \text{ persons} : 200 \text{ persons} = \text{Rs. } 15 : \text{Rs. } 75$$



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37. Are the following statements true ?

$$7.5 \text{ litres} : 15 \text{ litres} = 5 \text{ kg} : 10 \text{ kg}$$



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38. Are the following statements true ?

$$99 \text{ kg} : 45 \text{ kg} = \text{Rs. } 44 : \text{Rs. } 20$$



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39. Are the following statements true ?

45 km : 60 km = 12 hours : 15 hours.



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40. Determine if the following ratios form a proportion. Also, write the middle terms and extreme terms where the ratios form a proportion.

(a) 25 cm : 1 m and Rs. 40: Rs.160



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41. Determine if the following ratios form a proportion. Also, write the middle terms and extreme terms where the ratios form a proportion.

39 litres : 65 litres and 6 bottles : 10 bottles



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42. Determine if the following ratios form a proportion. Also, write the middle terms and extreme terms where the ratios form a

proportion.

2 kg : 80 kg and 25 g : 625 g



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43. A total of 700 biscuits are to be distributed to 3 boys Ali, Ram and John. The number of biscuits received by Ali and Ram are in the ratio of 2 : 3 and the number received by John and Ram are in the ratio of 5 : 4. Find the number of biscuits received by each of them.



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44. If the cost of 7m of cloth is Rs. 294, find the cost of 5m of cloth.



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45. Ekta earns Rs. 1500 in 10 days. How much she wil earn in 30 days ?



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46. If it has rained 276 mm in the last 3 days, how many cm of rain will fall in one full week (7 days) ? Assume that the rain continues to fall at the same rate.



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47. Cost of 5 kg of wheat is Rs. 30.50.

What will be the cost of 8 kg of wheat ?



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48. Cost of 5 kg of wheat is Rs. 30.50.

What quantity of wheat can be purchased in Rs. 61 ?



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49. Shaina pays Rs. 7500 as rent for 3 months.

How much does she have to pay for a whole year, if the rent per month remains same ?



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50. Cost of 4 dozens of banana is Rs. 60. How many bananas can be purchased for Rs. 12.50.



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51. The weight of 72 books is 9kg. What is the weight of 40 such books ?



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52. Raju purchases 10 pens for Rs. 150 and Manish buys 7 pens Rs. 84. Can you say who

got the pens cheaper ?



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53. Anish made 42 runs in 6 overs and Anup made 63 runs in 7 overs. Who made more runs per over ?



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54. Cost of 20 metres of cloth is Rs. 1500. Find the cost of 12 metres of cloth.



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55. A bus covers a distance of 550 km in 5 hours.

How far will it go in 7 hours?



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56. A bus covers a distance of 550 km in 5 hours.

How much time will it take to cover a distance of 3080 km?



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57. A train takes 6 hours to cover 300 km. How much distance will it cover in 9 hours?



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58. The weight of 24 similar books is 15 kg. Find the weight of 16 similar books.



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59. A family consumes 135 litres of milk in 45 days. How much milk will it consume in 18 days?



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Conceptive Worksheet

1. Two boys weigh 25 kg and 20 kg. Find the ratio of their weights.



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2. The volume of water in two containers are 3 litres and 1,500 ml. Find the ratio of the volumes of water.



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3. Determine whether the following ratios are equivalent ratios 2 : 3 and 10 : 15.



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4. Find the ratio of the following :

30 minutes to 1.5 hours



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5. Find the ratio of the following :

40 cm to 1.5 m



Watch Video Solution

6. Find the ratio of the following :

55 paise to Re. 1



Watch Video Solution

7. Find the ratio of the following :

500 ml to 2 litre



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8. There are 102 teachers in a school of 3300 students. Find ratio of the number of teachers to the number of students.



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9. In a college out of 4320 students, 2300 are girls. Find the ratio of :

Number of girls to the total number of students.



Watch Video Solution

10. In a college out of 4320 students, 2300 are girls. Find the ratio of :

Number of boys to the number of girls.



Watch Video Solution

11. In a college out of 4320 students, 2300 are girls. Find the ratio of :

Number of boys to the total number of students.



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12. Cost of a dozen pens is Rs. 180 and cost of 8 ball pens is Rs. 56. Find the ratio of cost of a pen to the cost of a ball pen.



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13. Divide 20 pens between Sheela and Sangeeta in the ratio 3 : 2.



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14. Given $A : B = 4 : 3$. find A if $A + B = 28$.



Watch Video Solution

15. Given PQR is a straight line and

$$PQ : QR = 3 : 7.$$

Find $QR : PQ$



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16. If the ratio of male teachers to female teachers in a school is $2 : 5$, find the total number of teachers in the school, if the number of female teachers in the school is 25.



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17. If 15 pens cost Rs. 35, what is the cost of 39 pens?



Watch Video Solution

18. If the cost of 30 pencils is Rs. 240, what is the cost of 18 pencils?



Watch Video Solution

19. If 3 scales cost Rs. 18. Find the cost of 1 scale.



Watch Video Solution

20. The cost of 5 balls is Rs. 40. What is the cost 10 balls?



Watch Video Solution

21. The cost of 5 books is Rs. 40. What is the cost of 7 books?



Watch Video Solution

22. The cost of 3 bottles is Rs. 69. Find the price of 8 such bottles.



Watch Video Solution

23. If the cost of 5 ice creams is Rs. 15, find the cost of 9 ice creams.



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24. A truck runs 495 km on 18 litres of diesel. How many kilometers can it run on 34 litres of diesel?



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25. 12 men can reap a field in 25 days. In how many days can 20 men reap the same field.



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26. In an army camp, there were provisions for 425 men for 30 days. However, 375 men attended the camp. How long did the provisions last?



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27. If a car runs 320 km on 5 litre of petrol, how much petrol will be needed for 160 km run?



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Summative Worksheet

1. There are 30 boys and 20 girls in a class. The ratio of the number of girls to the number of boys is

A. 2:3

B. 3: 2

C. 2: 5

D. 3: 5

Answer:



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2. There are 25 boys and 25 girls in a class. The ratio of the number of boys to the total number of students is

A. 1 : 2

B. 1 : 3

C. 2 : 3

D. 3 : 2

Answer:



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3. The height of Apala is 150 cm. The height of Pari is 120 cm. The ratio of the height of Apala to the height of Pari is

A. 4: 5

B. 5: 4

C. 5: 2

D. 4: 1

Answer:



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4. The cost of a car is Rs. 3,00,000. The cost of a motorbike is Rs. 50,000. The ratio of the cost of motorbike to the cost of car is

A. 1 : 6

B. 1 : 5

C. 1 : 4

D. 1 : 3

Answer:



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5. The speed of Shubham is 6 km per hour. The speed of Yash is 2 km per hour. The ratio of the speed of Shubham to the speed of Yash is

A. 2:3

B. 3:1

C. 1:3

D. 3:2

Answer:



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6. The length and breadth of a rectangular park are 50 m and 40 m respectively. Find the ratio of the length to the breadth of the park.

A. 4: 5

B. 4: 1

C. 5: 1

D. 5: 4

Answer:



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7. The ratio 40 cm to 1 m is

A. 2: 5

B. 3: 5

C. 4: 5

D. 5: 2

Answer:



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8. In a family, there are 8 males and 4 females.

The ratio of the number of females to the number of males is

A. 1 : 2

B. 1 : 4

C. 1 : 8

D. 2 : 1

Answer:



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9. Which of the following ratio is equivalent to
2 : 3?

A. 4 : 8

B. 4 : 9

C. 6 : 9

D. 6 : 12

Answer:



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10. Which of the following ratio is not equivalent to 10 : 5?

A. 1 : 2

B. 2 : 1

C. 20 : 10

D. 30 : 15

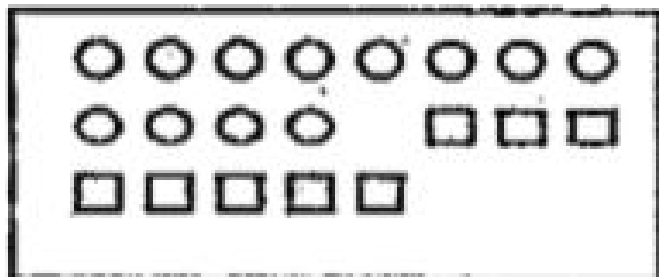
Answer:



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11. Find the ratio of number of circles and number of squares inside the following

rectangle:



A. 3: 1

B. 2: 1

C. 2: 3

D. 3: 2

Answer:



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12. There are 20 teachers in a school of 500 students. The ratio of the number of teachers to the number of students is

A. 1 : 20

B. 1 : 50

C. 1 : 25

D. 25 : 1

Answer:



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13. The ratio of 25 minutes to 1 hour is

A. 7:5

B. 5:12

C. 12:5

D. 5:1

Answer:



Watch Video Solution

14. Out of 30 students in a class, 20 like cricket and 10 like Hockey. The ratio of the number of students liking Hockey to the total number of students is

A. 3 : 1

B. 1 : 3

C. 2 : 3

D. 1 : 2

Answer:



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15. The cost of 1 dozen bananas is Rs. 30. The cost of 6 oranges is Rs. 18. The ratio of the cost of a banana to the cost of an orange is

A. 3 : 2

B. 2 : 3

C. 6 : 5

D. 5 : 6

Answer:



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16. The present age of Hari Kishan is 60 years. The present age of Manish is 30 years. The ratio of the age of Manish to the age of Hari Kishan 10 years ago was

A. 2: 5

B. 5: 2

C. 2: 3

D. 3: 2

Answer:



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17. 100 students appeared in annual examination. 60 students passed. The ratio of the number of students who failed to the total number of students is

A. 5: 2

B. 2: 5

C. 2: 3

D. 3: 2

Answer:



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18. Rs. 100 are divided between Sangeeta and Manish in the ratio 4:1. Find the amount Sangeeta gets.

A. Rs. 80

B. Rs. 20

C. Rs. 60

D. Rs. 50

Answer:



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19. Which of the following is true?

A. $15:40 :: 10:30$

B. $16:48 :: 25:75$

C. $40:60 :: 30:40$

D. $20:100 :: 30:120$

Answer:



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20. Which of the following is false?

A. $25g : 30g :: 40kg : 48kg$

B. $81 : 91 :: 24h : 27h$

C. $32\text{ m} : 40\text{ m} :: 6\text{ minutes} : 12\text{ minutes}$

D. $25\text{ km} : 60\text{ km} :: \text{Rs. } 10 : \text{Rs. } 24.$

Answer:



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21. Which of the following statement is not true?

A. $4:7 = 5:9$

B. $\text{Rs. } 5 : \text{Rs. } 25 = 12 \text{ g} : 60 \text{ g}$

C. $30 : 80 = 6 : 16$

D. $12 : 36 = 14 : 42.$

Answer:



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22. The cost of 10 notebooks is Rs. 100. The cost of 1 notebook is

A. Rs. 10

B. Rs. 100

C. Rs. 20

D. Rs. 5

Answer:



Watch Video Solution

23. The cost of 1 dozen pens is Rs. 24. Find the cost of 30 pens.

A. Rs. 40

B. Rs. 45

C. Rs. 30

D. Rs. 60

Answer:



Watch Video Solution

24. The cost of 3 envelopes is Rs. 15. The cost of 10 envelopes is

A. Rs. 20

B. Rs. 30

C. Rs. 45

D. Rs. 50

Answer:



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25. The cost of 5 kg of tomatoes is Rs. 100. The cost of 2 kg of tomatoes is

A. Rs. 20

B. Rs. 40

C. Rs. 30

D. Rs. 50

Answer:



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26. The cost of 20 m of cloth is Rs. 400. The cost of 15 m of cloth is

A. Rs. 100

B. Rs. 200

C. Rs. 300

D. Rs. 360

Answer:



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27. The salary of a month of an employee is Rs. 4000. The annual salary of the employee is

A. Rs. 48000

B. Rs. 24000

C. Rs. 12000

D. Rs. 8000

Answer:



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28. An aeroplane covers a distance of 5000 km in 5 hours. How much distance will it cover in 2 hours?

- A. 1000 km
- B. 2000 km
- C. 3000 km
- D. 4000 km

Answer:



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29. The fare for 5 tickets from Kroikalam to Mathura is Rs. 150. The fare for 3 tickets is

A. Rs. 90

B. Rs. 60

C. Rs. 75

D. Rs. 45

Answer:



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30. 150 kg of oil can be filled in 10 containers.

To fill 750 kg of oil, how many containers will be required?

A. 10

B. 20

C. 40

D. 50

Answer:



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31. The cost of 8 almirahs is Rs. 8000. The cost of 1 almirah is

A. Rs. 1000

B. Rs. 2000

C. Rs. 4000

D. Rs. 6000

Answer:



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1. The area of square ABCD is 144 cm^2 and the area of square PQRS is 81 cm^2 and the area of square PQRS is 81 cm^2 , find the ratio of the side AB to the side PQ.



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2. The area of square DEFG is 64 cm^2 and the area of square WXYZ is 36 cm^2 , find the ratio

of the perimeter of square DEFG to the perimeter of square WXYZ.



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3.



The length of the straight line PQR is 22 cm. If $PQ : QR = 4 : 7$, find the length of PQ.



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4. The tax on the income of a teacher is Rs. 360. If the income of the teacher is Rs. 24,000, find the ratio of the tax to the income.



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5. A school has 600 students. The number of boys in the school is 360. Find the ratio of the number of girls to the number of boys in the school.



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6. PQRS is a straight line. $PQ = 2$ cm and $PS = 40$ cm. If $PR : RS = 7 : 3$, then QR in cm is:

A. 12

B. 10

C. 26

D. 28

Answer:



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7. A sum of money is divided into three parts in the ratio of 2 : 3 : 4. The largest part is Rs. 140. The total sum of money is:

A. Rs. 540

B. Rs. 315

C. Rs. 310

D. Rs. 360

Answer:



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8. A total of 500 pieces of sweets is to be divided among Radha, Ahmed and Krishna respectively in the ratio of 3 : 8 : 14. How many pieces of sweets will Radha get?

A. 60

B. 80

C. 160

D. 280

Answer:



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9. If $\frac{3}{4}$ of the property costs Rs. 15,000 what is the cost of $\frac{1}{2}$ of it?

A. Rs. 16,000

B. Rs. 20,000

C. Rs. 14,000

D. Rs. 10,000

Answer:



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10. If 50 kg of wheat cost Rs. 550 what is the cost of 11 kg?

A. Rs. 150

B. Rs. 121

C. Rs. 125

D. Rs. 110

Answer:



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11. If Ramya types 180 words in 4 minutes. How many words will she type in 9 minutes?

A. 405

B. 450

C. 540

D. 504

Answer:



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12. If there are 4000 pineapples in 50 boxes.
How many pineapples will be there in 35 boxes?

A. 2000

B. 2700

C. 3500

D. 2800

Answer:



Watch Video Solution

13. If 10 cans contain 500 litres of milk. Then in how many cans 200 litres of milk can be filled?

A. 5

B. 1

C. 2

D. 4

Answer:



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14. 1500 sheets are required to make 100 notebooks. How many sheets will be required to make 12 note books?

A. 180

B. 200

C. 120

D. 100

Answer:



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15. If $\frac{2}{3}$ of the property costs Rs. 1200, then what is the cost of the remaining property?

A. Rs. 1,200

B. Rs. 600

C. Rs. 900

D. Rs. 1,800

Answer:



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16. If $\frac{4}{5}$ th of strength of a class is 80. What is the total strength of class?

A. 20

B. 100

C. 110

D. 90

Answer:



Watch Video Solution

17. If a train covers 200 km in 5 hrs. How many km will it cover in $8\frac{1}{2}$ hrs?

A. 320 km

B. 350 km

C. 340 km

D. none of these

Answer:



Watch Video Solution

18. If there are 4000 oranges in 50 boxes and the cost of 400 oranges is Rs. 120. What is the cost of boxes containing 4000 oranges?

A. Rs. 1,600

B. Rs. 1,200

C. Rs. 1,800

D. Rs. 4,800

Answer:



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19. If $\frac{1}{3}$ rd and $\frac{2}{3}$ rd of the property costs Rs. 600 and Rs. 1200 respectively. What is the cost of total property?

A. Rs. 1,200

B. Rs. 1,500

C. Rs. 1,800

D. Rs. 2,400

Answer:



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1. The ratio of Ali's age to that of his younger brother is $7 : 5$. If his younger brother is 15 years old, then Ali's age in years is:

A. 18

B. 17

C. 21

D. 28

Answer:



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