MATHS

BOOKS - MBD

RATIO AND PROPORTION

Example

1. In a class,there are 20 boys and 40 girls.What is the ratio of the number of boys to the number of girls?

2. Ravi walks 6 km in an hour while Roshan walks 4 km in an hour.What is the ratio of the distance covered by Ravi to the distance covered by Roshan?

3. Saurabh takes 15 minutes to reach school from his house and Sachin takes one hour to

reach school from house.Find the ratio of the time taken by Saurabh to the time tken by Sachin

4. Cost of a toffee is 50 paise and cost of a chocolate is $Rs 10$.Find the ratio of the cost of a toffee to the cost of a chocolate.

A. $1:2$

B. $1:20$

C. $1:5$

D. $1:25$

Answer: B

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5. In a school,there were 73 holidays in one year.What is the ratio of the number of holidays to the number of days in one year?

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6. There are 20 girls and 15 boys in a class. What is the ratio of nuymber of girls to the number of boys?

7. 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?

8. Out of 30 students in a class,6 like football,12 like cricket and remaining like tennis.Find the ratio of :

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

9. 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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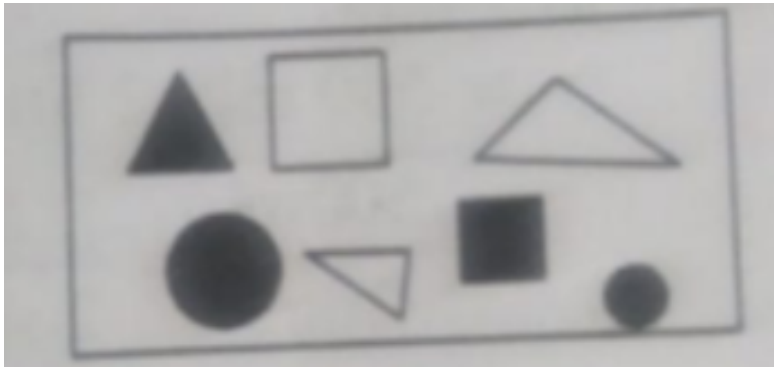
10. See the figure and find the ratio of :

Number of triangles to the number of circles inside the rectangle.

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11. See the figure and find the ratio of :

Number of squares to all the figures inside the

rectangle.

12. See the figure and find the ratio of :

Number of circles to all the figures inside the

rectangle.

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13. Distance tavelled 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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14. Fill in the following blanks:

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

15. Find the ratio of the following :

$$81 \rightarrow 108$$

16. Find the ratio of the following :

$98 \rightarrow 63$

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17. Find the ratio of the following :

$33km \rightarrow 121km$

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18. Find the ratio of the following :

$30 \text{ min} utes \rightarrow 45 \text{ min} utes$

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19. Find the ratio of the following:

$30 \text{ min} utes \, ot \, 1.5 hours$

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20. Find the ratio of the following:

$$40cm \rightarrow 1.5m$$

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21. Find the ratio of the following:

$$55paise \rightarrow Re.1$$

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22. Find the ratio of the following:

$500ml \rightarrow 2litre$

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23. 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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24. 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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25. There are 102 teachers in a school of 3300

students.Find ratio of the number of teachers

to the numbe of students.

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26. In a college out of 4320 tudents,2300 are girls.Find the ratio of :

Number of girls to the total number of students.

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27. In a college out of 4320 tudents,2300 are girls.Find the ratio of :

Number of boys to the number of girls.

▶ **Watch Video Solution**

28. In a college out of 4320 tudents,2300 are girls.Find the ratio of :

Number of boys to the total number of students.

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

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

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

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

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

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

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32. Cost of a dozen pens is Rs.180 and cost of 8 ball pens is Rs.56 .Find the ratio o fcost of a

pen to the cost of a ball pen.

33. 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.

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

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35. Mother wants to divide Rs.36 amount her daughters Shreya and Bhoomika in the ratio of their ages.If age of Shreya is 15 years and age of Bhoomika is 12 years,find how much Shreya and Bhoomika will get.

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

Present age of father to the present age of son.

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

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

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

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

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

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

40. Check whether the given ratios are equal,i.e., they are in proportion.If yes,then write them in the proper form.

$1:5$ and $3:15$

41. Check whether the given ratios are equal,i.e., they are in proportion.If yes,then write them in the proper form.

$2:9$ and $18:81$

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42. Check whether the given ratios are equal,i.e., they are in proportion.If yes,then write them in the proper form.

$15:45$ and $5:25$

43. Check whether the given ratios are equal,i.e., they are in proportion.If yes,then write them in the proper form.

$4 : 12$ and $9 : 27$

44. Check whether the given ratios are equal,i.e., they are in proportion.If yes,then

write them in the proper form.

Rs.10 to Rs.15 and 4 to 6.

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45. Determine if the following are in proportion:

15, 45, 40, 120

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46. Determine if the following are in proportion:

33, 121, 9, 96

47. Determine if the following are in proportion:

24, 28, 36, 48

48. Determine if the following are in proportion:

32, 48, 70, 210

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49. Determine if the following are in proportion:

4, 6, 8, 12

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50. Determine if the following are in proportion:

33, 44, 75, 100

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

$16:24::20:30$

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

$21:6::35:10$

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

$12:18::28:12$

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

$8:9:24:27$

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

$5.2:3.9::3:4$

▶ Watch Video Solution

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

$0.9 : 0.36 : : 10 : 4$

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57. Are the following statements true?

40 persons:200 persons=Rs.15:Rs.75

▶ Watch Video Solution

58. Are the following statements true?

$$7.5litres : 15litres = 5kg : 10kg$$

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59. Are the following statements true?

$$99kg : 45kg = Rs.44 : Rs.20$$

▶ **Watch Video Solution**

60. Are the following statements true?

$$32m : 64m = 6\sec : 12\sec$$

▶ **Watch Video Solution**

61. Are the following statements true?

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

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

25 cm:1 m and Rs.40 : Rs.160

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

proportion.

39 litres:65 litres abnd 6 bottles:10 bottles

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

2kg:80 kg and 25 g:625 g.

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

200 ml:2.5 litre and Rs.4:Rs.50.

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

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67. Ekta earns Rs.1500 in 10 days.How much she will earn in 30 days?

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68. 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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69. Cost of 5kg of wheat is Rs.30.50.

What will be the cost of 8 kg of wheat?

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

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

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71. The teperature dropped 15 degree celsius in the last 30 days.If the rate of temperatue drop remains the same,how many degrees will the temperature drop in the next ten days?

72. 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?

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

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

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75. A truck requires 108 liters of diesel for covering a distance of 594 km.How much diesel will be required by the truck to cover a distance of 1650 km?

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76. 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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77. 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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Exercise

1. There are 45 persons working in an office.If the number of females is 25 and the remaining are males,find the ratio of :

the number of females to number of males.

2. The ratio of number of males to number of females in a club are 7:4. If there are 84 males in the club, the total number of members in the club are

3. Give two equivalent ratios of 5:4.

4. Fill in the following blanks:

$$\frac{14}{21} = \frac{\square}{3} = \frac{6}{\square}.$$

5. Ratio of distance fo the school from Mary's home to the distance of the school from John's home is 2:1

Who lives nearer to the school?

6. Ratio of distance of the school from Mary's home to the distance of the school from Jhon's home is 2:1. a) Who lives nearer to the school? b) Complete the following table which shows some possible distance that Mary and John could live from the school.

7. Ratio of distance fo the school from Mary's home to the distance of the school from John's

home is 2:1

If the ratio of distance of Mary's home to the distance of Kalam's home from school is 1:2 ,then who lives nearer to the school.

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8. Divide Rs.60 in the ratio 1:2 between Kriti and Kiran.

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13. In a school,there were 73 holidays in one year.What is the ratio of the number of holidays to the number of days in one year?

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14. Are the ratios 25 g:30 g and 40 g :48 kg in proportion?

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15. Are 30,40,45 and 60 in proportion?

16. Do the ratios 15 cm to 2 m and 10 sec to 3 minute form a proportion?

17. Check whether the given ratios are equal i.e.they are in propoprtion.

$1:5$ and $3:15$

18. Check whether the given ratios are equal i.e.they are in propoprtion.

$2:9$ and$18:81$

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> ▶ Watch Video Solution

21. Check whether the given ratios are equal i.e.they are in propoprtion.

Rs.10 to Rs.15 and 4 to 6.

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22. If the cost of 6 cans of juice is Rs.210 then what will be the cost of 4 cans of juice?

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23. A motoerbike travels 220 km in 5 litres of petrol.How much distance will it cover in 1.5 litres of petrol.

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24. If the cost of a dozen of soaps is Rs.153.80 ,what will be the cost of 15 such soaps?

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25. Cost of 105 envelopes is Rs.35.How many envelopes can be bought for Rs.10?

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26. A car travels 90 km in $2\dfrac{1}{2}$ hour. How much time is required to cover 30 km with the same speed?
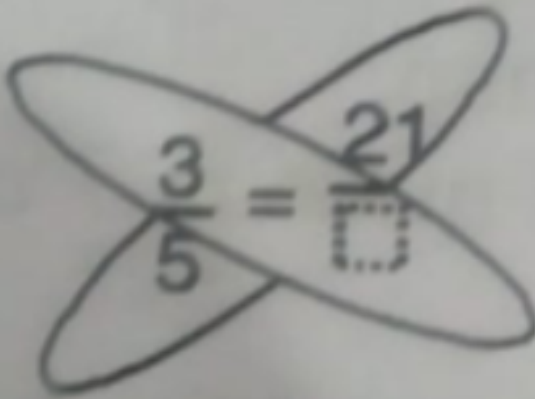
> ▶ **Watch Video Solution**

27. A car travels 90 km in $2\dfrac{1}{2}$ hour.

Find the distance covered in 2 hours with the

same speed.

28. Which of the following complete the given

figure?

$$\frac{3}{5} = \frac{21}{\square}$$

A. 35

B. 45

C. 15

D. 61

Answer:

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29. Which of the following complete the given figure?

$$\frac{3}{5} = \frac{21}{\square}$$
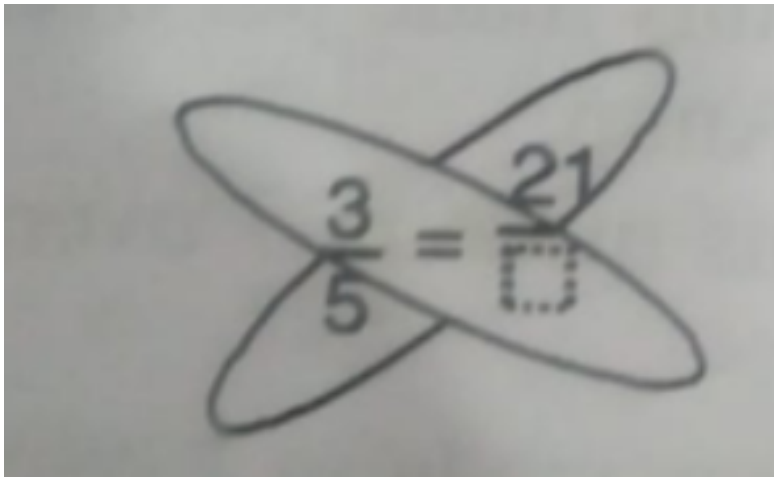
A. 24

B. 26

C. 18

D. 20

Answer:

30. Fill in the following blanks:

$$\frac{14}{21} = \frac{\square}{3} = \frac{6}{\square}.$$

A. 7

B. 3

C. 2

D. 4

Answer:

31. Fill in the following blanks:

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

   A. 5

   B. 6

   C. 4

D. 2

Answer:

32. Which of the following complete the given blank space? $\dfrac{5}{6} = \dfrac{\square}{30}$

A. 20

B. 25

C. 35

D. 45

Answer:

33. The length of a room is 30 m and breadth

is 20 m.The ratio of length to breadth is :

A. $3:2$

B. $2:3$

C. $5:4$

D. $4:5.$

Answer:

> ▶ **Watch Video Solution**

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34. Sheena has 25 marbles and her friend Shabnam has 30 marbles Ratio of marble of Sheena and Shabnam is.......

A. $2:3$

B. $5:6$

C. 5 : 4

D. 6 : 5.

Answer:

35. Find ratio of 50 m and 15 m.

A. 5 : 3

B. 10 : 3

C. 3 : 10

D. $3 : 5.$

Answer:

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