Mathematics – Class 6

Ratio and Proportion

1. The mean proportion of 9 and 16 is@16@9@12@None of these@0010

2. If 12, 14, 9 and x are in proportion then find the value of x.@21@9@10.5@105@0010

3. What is the simplest form of the ratio 144:28? @28:4@36: 7@7:36@1:2@0100

4. If 5, 30, 3 and x are in proportion then find the value of x.@24@6@18@15@0010

5. Identify the ratio of 4 seconds and 1/4 minute from the following.@4:15@1:4@15:4@1:16@1000

6. Which of the following is a proportion?@3,27,9,9@5,11,15,44@3,5,15,25@4,3,36,18@0010

7. Find the ratio of 81 to 108.@it is 1:4@it is 4:3@it is 3:4@None of these@0010

8. The length and width of a tape are 2 m and 28 cm. What is their ratio?@100:14@7:50@50:7@1:8@0010

9. If x: y: : y : z, identify the correct statement from among the following.@xy = yz@y2 = xz@xyz = x @zy = x@0100

10. Divide 20 pens between Sheela and Sangeeta in the ratio of 3:2.@Sheela = 15 pens, Sangita = 5 pens

@Sheela = 8 pens, Sangita = 12 pens@Sheela = 12 pens, Sangita = 8 pens@None of these@0010

11. The mean proportion of 4 and 16 is@5@4 @8@6@0010

12. In a class, there are 20 boys and 40 girls. What is the ratio of the number of boys to the number of girls?@it is 2:1@it is 1:3@it is 3:1 @it is 1:2@0001

13. Length of a room is 30 m and its breadth is 20 m. Find the ratio of length of the room to the breadth of the room.@it is 2:3@it is 3:2@it is 1:3@it is 1:2@0100

14. In a cricket coaching camp, 1200 children are trained out of which 900 are selected for various matches. What is the ratio of non-selected children to the total number of children?@300:120@4:1@1:4 @120:300@0010

15. 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.@it is 1:5 @it is 1:4@it is 4:5@it is 5:4@0001

16. If 49, 35, x and 25 are in proportion then find the value of x.@25@15@12@35@0001

17. If 8, 18, 18 are x in proportion then find the value of x.@40.5@18@405@81@1000

18. 6 : 4 is equivalent ratio of _____. @it is 3:2 @it is 2:3@it is 1:2@None of these@1000

19. If x, 24, 30 and 16 are in proportion then find the value of x.@30@45@15@None of these@0100

20. Find the mean proportion of 25:10::10:4.@25@10@4@100@0100

21. Fill in the box so that the three numbers,32 and 64 are in proportion. @36@18@16@15@0010

22. If the cost of 6 cans of juice is Rs 210, then what will be the cost of 4 cans of juice?@Rs 140@Rs 280 @Rs 70@None of these@1000

23. What are the extremes of the proportion 9:3::36:12?@9, 3@36, 12@3, 36@9, 12@0001

24. The first, second and the third terms of a proportion are 5,120 and 40. What is the fourth term?@89@480 @960@98@0010

25..If A:B = 5:7 and B:C = 6:11, then is.@55:77:66@30:42:77@35:49:42@None of these@ 0100
26.If A:B = 3:4 and B:C = 8:9, then is.@1:3@3:2@2:3@1:2@0010
27.If A:B = 8:15, B:C=5:8 and C:D = 4:5, then is equal to.@2:7@4:15@8:15@15:4@0100
28.If 2A = 3B = 4C, then is.@2:3:4@4:3:2@6:4:3@20:15:2@0010
29.If A/3 = B/4 = C/5, then is.@4:3:5@5:4:3@3:4:5@20:15:2@0010
30.If 2A=3B and 4B = 5C, then is.@4:3@8:15@15:8@3:4@0010
31.The ratio of 4³⁵:2⁵ is same as.@2:1@4:1@7:5@7:10@0100
32.If 1/5:1/x=1/x:1/125, then the value of is.@1.5@2@ 2.5@3.5@0010
33.If x : y = 5 : 2, then (8x + 9y) : (8x+2y) is.@22:29@26:61@29:22@61:26@0010
34.If (x : y) = 2 : 1, then (x² - y²) : (x² + y² is.@3:5@5:3@1:3@3:1@1000
35.If x² + 4y² = 4xy, then is.@2:1@1:2@1:1@1:4@1000
36.If x/5 = y/8, then (x + 5): (y + 8) is equal to.@3:5@13:8@8:5@5:8@0001
37.If a/3 = b/4 = c/7, then a + b + c/c is equal to.@ 7@2@1/2,@1/7,@0100
38.If (a + b) : (b + c) : (c + a) = 6: 7: 8 and (a + b + c) = 14, then the value of is@ 6@7@ 8@14@1000
39.If Rs. 782 be divided into three parts, proportional to 1/2 : 2/3 : 3/4, then the first part is.@ Rs. 182@Rs. 190@ Rs. 196@Rs. 204@0001
40.Two numbers are in the ratio If 7 is added to both, their ratio changes to 3:5. The greatest number is. @ 24@26@ 28@32@0010
41.The ratio of three numbers is and the sum of their squares is 1250. The sum of the numbers is. @ 30 @50 @ 60@90@0010

42.The sub duplicate ratio of 484 : 361 is_____ @21 : 19@22 : 18@22 : 19@22 : 17@0010
43.The sub triplicate ratio of 1000 : 512 is___ @5: 2@5 : 4@5 : 8@5 : 1@0100
44.The reciprocal ratio of 4: 1/9 is_____@ 36 : 1@1 : 36@ 1 : 6@6 : 1@0100
45.The reciprocal of compound ratio of 5 : 6 and 10 : 9 is__ @ 25 : 27@27 : 25@9 : 4@None@0100
46.If x/8 = y/3, , then triplicate ratio of x : y is___ @ 512 : 64@512 : 125@ 512 : 27@512 : 1@0010
47.The compound ratio of 3x : 4y and ab²: c² and c : b² is @3ax : 4cy@3cx : 4ay@cxy : 4cx@3ac : 4xy@1000
48.If , 7x – 4y/3x + y = 5/13 then y² : x² is____ @ 9 : 16@16 : 9@ 3 : 4@4 :3@0100
49.If A : B is the duplicate ratio of A + x : B + x, then @B)@ @x² = A/B@0010
50.If 2x : 3y be the duplicate ratio of 2x – m : 3y – m, then which of the following is correct? @m² = 2xy@m² = 3xy@m² = xy @m² = 6xy@0001
51.If 25 is the duplicate ratio of 5n + 4 / 2n -1, then the value of n is @9/5,@1/5,@ 9@None@1000
52.If x + y : x – y is equal to the duplicate ratio of 3 : 1 then@125 : 64@25 : 16@5 : 4@8 : 1@1000

53.The compound ratio of $x^2-y^2 : x^2+y^2$ and $x^4-y^4 : (x+y)^4$ @ $\frac{(x-y)^2}{(x+y)^2}$ @ $\frac{(x+y)^2}{(x-y)^2}$ @ $\frac{x^2+y^2}{x^2-y^2}$ @ $\frac{x^2-y^2}{x^2+y^2}$ @1000

54.If 1st, 2nd and 4th terms of a proportion are respectively 5.2, 3.9 and 3, then its third term is____@6@2@ 4@3@0010

55.If 16, x, 36 are in proportion, then the mean proportional is___@ 28@ 26@ 24@22@0010

56.If 15, 30, y are in proportion, then the third proportional is____@ 80@ 70@ 50@60@0001

57.If , $2\frac{1}{2} : x = 12\frac{1}{2} : 6\frac{1}{4}$ then the value of x is__ @5/8,@5/2,@5/4, @5/16,@0010

58.The number that should be added to each of the numbers 8, 20, 12, 28 to make the new numbers proportional @ 8@ 6@ 4@2@0010

59.Two number whose mean proportional is 28 and the third proportional is 224 are @ 14, 28@28, 56@ 42, 56@14, 56@0001

60.The third proportional to x + y, 2x + 3y when x = 3, y = 2 is_____ @145/7, @142/7@143/7@144/5@0001

61.If b is the mean proportional of 9, 49; c is the third proportional to 7, 49d is the fourth proportional to 14, 49, 35, then the 4th proportional to b, c, d is@12015/6@12005/6@12025/6@11535/6@0100

62.If 2x – 5 = $\frac{y+4}{2} = z \div \frac{5}{2}$ = 5, then to mean proportional of x + y and y + z is @ $\sqrt{\frac{37\times11}{2}}$ @$\sqrt{\frac{37\times2}{11}}$ @ $\sqrt{\frac{37}{2\times11}}$ @None@1000

63.A school spends Rs.6000 per month towards wheat when the cost of the wheat is Rs.20 per kg. If the price goes up to Rs.25 per kg, then the amount of money spent on wheat is___@ 7600/-@ 7400/-@ 7200/-@7500/-@0001

64.If $22\frac{1}{2}$ m of silk costs Rs. 675, then the cost of $6\frac{1}{4}$ meters is__@ Rs.186.5@ Rs.188.5@Rs.187.5@Rs.182.5@0010

65.If 15 post cards cost Rs.11.25, then cost of 36 post cards is___ @ 28/-@26/-@ 27/-@29/-@0010

66.If 15 iron balls of the same size weight 10kg 50gms, then 4.690 kg is the weight of@ 5@6@ 7@9@0010

67.There are 120 students in a mess. The food is enough for 75 days. If 60 more students join the Mess, then the food will last for@ 60@40@ 50@75@0010

68.The amount of energy produced in human body is directly proportional to the amount of fats burnt. If burning of 24gms of fat energy produced 144 calories, then the amount of fats consumed to release 252 calories of energy is@48 gms@36 gms@42 gms@40 gms@0010

69.The pressure P exerted at any point on the base of a tank filled with liquid varies directly as the depth D of the liquid. The pressure exerted by the liquid 40 cms deep on the base of a tank is 80 grams/sq.cm. If the 25cm, then the pressure exerted is@ 100 gm/cm²@ 25 gm/cm²@ 75 gm/cm²@50 gm/cm²@0001

70.The distance d that an object will fall freely from rest varies directly as the square of times. An object fall 128metres in 4 seconds. If it falls in 16 seconds, then the height through where it will fall is@ 2048 m@2046 m@2044 m@2042 m@1000

71.100 people can construct a bridge in 150 days. If the bridge has to be constructed in 50 days, then the number of extra men required to complete the bridge is@250@150@200@225@0010

72.A publisher prints 32 lines in each page and takes 400 pages to print the matter. If the number of pages are restricted to 320 pages, then the number of line s printed in each page is@40@60@50@56@1000

73.The rate of vibrations (n) of a wire in tension is inversely proportional to its length (*l*) when the length of the wire is 160 cm, the vibrations are 400 per second. If the length is 100 cm, then the number of vibrations is@650@630@640@620@0010

74.England team scored 8 runs per over (R) in 50 overs (O). If India has to win in 40 over's, then the number of runs to be scored by them to win the match is_____(runs/over)@10@20@30@40@1000

75. The cost of a pen is ₹ 10. The cost of a penci 1 is ₹ 2. How many times of the cost of a pencil is the cost of a pen?@5times@2times@10times@none of these.@1000

76. The monthly salary of Hari Kishan is ₹ 80000. The monthly salary of Manish is ₹ 40000. How many times of the salary of Manish is the salary of Hari Kishan?@2 times@4 times@3times@8times.@1000

77. There are 30 boys and 20 girls in a class. The ratio of the number of girls to the number of boys is@2:3@3:2@2:5@3:5@1000

78. There are 25 boys and 25 girls in a class. The ratio of the number of boys to the total number of students is @1:2@1 : 3@2:3@3:2.@1000

79. 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 @4:5@5:4@5:2@4:1.@0100

80. The cost of a car is ₹ 3,00,000. The cost of a motorbike is ₹ 50,000. The ratio of the cost of motorbike to the cost of car is @1:6@1:5@1:4@1:3.@1000

81. 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@2:3@3:1@1:3@3:2.@0100

82. 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.@4:5@4:1@5:1@5:4.0001

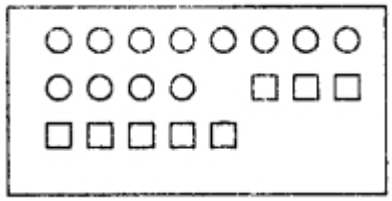
83. The ratio 40 cm to 1 m is@2:5@3:5@4:5@5:2.@1000

84. In a family, there are 8 males and 4 females. The ratio of the number of females to the number of males is @1:2@1:4@1:8@2:1.@1000

85. Which of the following ratios is equivalent to 2:3?@4:8 @4:9@6:9@6:12.@0010

86. Which of the following ratios is not equiva-lent to 10:5?@1:2@2:1@20:10@30:15.@1000

87. Find the ratio of number of circles and number of squares inside the following rectangle



@3:1 @2:1 @2:3 @3:2@0001

88. There are 20 teachers in a school of 500 students. The ratio of the number of teachers to the number of students is@1:20@1:50@1:25@25:1.@0010

89. The ratio of 25 minutes to 1 hour is@7:5@5:12@12:5@5:7.0100

90. 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@3:1@1:3@2:3@1:2.@0100

91. The cost of 1 dozen bananas is ₹ 30. The cost of 6 oranges is ₹ 18. The ratio of the cost of a i banana to the cost of an orange is@3:2@2:3@6:5@5:6.0001

92. 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@2:5@5:2@2:3@3:2.@1000

93. 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@5:2@2:5@2:3@3:2.0100

94. ₹ 100 are divided between Sangeeta and Manish in the ratio 4:1. Find the amount Sangeeta gets. @₹ 80 @₹ 20@₹ 60@₹ 50.@1000

95. Which of the following are in proportion?@2,3,20,30@3,4,15,18@1,3,11,22@2,5,40,80.@1000
96. Which of the following is true?@15:40::10:30@16:48:: 25:75@40:60 :: 30:40 @20:100 :: 30:120.@0100
97. Which of the following is false?@25 g : 30 g :: 40 kg : 48 kg@81 : 91 :: 24h : 27h@32 m : 40 m :: 6 minutes : 12 minutes@25 km : 60 km :: ₹ 10 : ₹ 24.@0010
98. Which of the following statement is not true?@4: 7 = 5 : 9@₹ 5 : ₹ 25 = 12g : 60g@30 : 80 = 6 :16 @12 : 36 = 14 : 42.@1000
99. A car requires 5 litres of petrol to cover 80 km. How many litres of petrol are required to cover 32 km?@1@2@3@4@0100
100. The cost of 10 notebooks is ₹ 100. The cost of 1 notebook is @₹ 10@₹100@₹20@₹5@1000