Practice Exercise

Level - I

1. Find the value of $\frac{x+a}{x-a}+\frac{x+b}{x-b}$, if $x=\frac{2ab}{a+b}$.

(a) -2 (b) 2

(c) 1 (d) -1

2. A certain sum of money was divided among A, B and C in a certain way. C got half as much as A and B together got. A got one third of what B and C together got. What is the ratio of A's share to that of C's share?

(a) 1 : 4 (b) 3 : 4

(c) 4 : 1 (d) 3 : 5

3. Two numbers are in the ratio of 3 : 4. If 5 is subtracted from each, the resulting numbers are in the ratio 2 : 3. Find the numbers

(a) 12, 16 (b) 24, 32

(c) 60, 80 (d) 15, 20

4. The wages of labourers in a factory increased in the ratio 22 : 25 and there was a reduction in their number in the ratio 15 : 11. Find the original wage bill if the present bill is ₹ 5000.

(a) ₹2500 (b) ₹3000

(c) ₹5000 (d) ₹6000

5. Which of the following numbers should be added to 11, 15, 17 and 23 so that they are in proportion?

(a) 2 (b) 3

(c) 5 (d) 1

6. Find the forth proportional to $12X^3, 9aX^2, 8a^3X$.

(a) $4a^3$ (b) $6a^4$

(c) $5a$ (d) $7a^5$

7. Vijay decides to leave 100 acres of his land to his three daughters Vijaya, Sunanda and Ansuya in the proportion of one-third, one-fourth and one-fifth respectively. But Vijaya suddenly expires. Now how should Vijay divide the land between Sunanda and Anusuya?

(a) $\frac{500}{9}, \frac{400}{9}$ (b) $\frac{450}{8}, \frac{350}{8}$

(c) $\frac{420}{7}, \frac{280}{7}$ (d) $\frac{320}{7}, \frac{380}{7}$

8. Find $a : b : c$, if $6a = 9b = 10c$.

(a) 12 : 10 : 8 (b) 15 : 4 : 3

(c) 15 : 18 : 9 (d) 15 : 10 : 9

9. What is the least integer which when added to both terms of the ratio 5 : 9 will make a ratio greater than 7 : 10?

(a) 6 (b) 8

(c) 5 (d) 7

10. If $a : b = 2 : 3, b : c = 3 : 4, c : d = 4 : 5$, find $a : b : c : d$.

(a) 5 : 4 : 3 : 2 (b) 30 : 20 : 15 : 12

(c) 2 : 3 : 4 : 6 (d) 2 : 3 : 4 : 5

11. ₹ 1220 is divided, among A, B, C and D, such that B's share is $\frac{5}{9}^{th}$ of A's; C's share is $\frac{7}{10}^{th}$ of B's and D has $\frac{1}{3}$ as much as B and C together. Find A's share.

(a) ₹ 540 (b) ₹ 802

(c) ₹ 100 (d) ₹ 650

12. In an examination, there are five subjects and each has the same maximum. A boy's marks are in the ratio 3 : 4 : 5 : 6 : 7 and his aggregate is $\frac{3}{5}$ th of the full marks. In how many subjects did he get more than 50% marks?

(a) 1 (b) 2

(c) 3 (d) 4

13. Three friends started a business of renting out air conditioners by investing ₹ 20000, ₹ 24000 and ₹ 16000, respectively. C gets 20% of total profit for repair and maintenance of the air conditioner. If in a particular year, C gets ₹ 487.50 less than the total earnings of the other two, then the total profit for the year is :

(a) ₹2812.50 (b) ₹3625.50

(c) ₹4515.00 (d) None of these

14. The ratio of the prices of two houses A and B was 4 : 5 last year. This year, the price of A is increased by 25% and that of B by ₹ 50000. If their prices are now in the ratio 9 : 10, the price of A last year was :

(a) ₹3,60,000 (b) ₹4,50,000

(c) ₹4,80,000 (d) ₹5,00,000

15. The dimensions of a rectangular room when increased by 4 metres are in the ratio of 4 : 3 and when decreased by 4 metres, are in the ratio of 2 : 1. The dimensions of the room are

(a) 6 m and 4 m (b) 12 m and 8 m

(c) 16 m and 12 m (d) 24 m and 16 m

16. The sum of three numbers is 98. If the ratio of the first to the second is 2 : 3 and that of the second to the third is 5 : 8, then the second number is:

(a) 20 (b) 30

(c) 38 (d) 48

17. Two numbers are such as that square of one is 224 less than 8 times the square of the other. If the numbers are in the ratio of 3 : 4, they are

(a) 12, 16 (b) 6, 8

(c) 9, 12 (d) None of these

18. Tea worth ₹ 126 per kg and ₹ 135 per kg are mixed with a third variety in the ratio 1 : 1 : 2. If the mixture is worth ₹ 153 per kg, then the price of the third variety per kg is

(a) ₹ 169.50 (b) ₹ 170

(c) ₹ 175.50 (d) ₹ 180

19. In a mixture of 45 litres, the ratio of milk and water is 3 : 2. How much water must be added to make the ratio 9 : 11?

(a) 10 litres (b) 15 litres

(c) 17 litres (d) 20 litres

20. The ratio of the rate of flow of water in pipes varies inversely as the square of the radii of the pipes. What is the ratio of the rates of flow in two pipes of diameters 2 cm and 4 cm, respectively?

(a) 1 : 2 (b) 2 : 1

(c) 1 : 8 (d) 4 : 1

21. Given that 24 carat gold is pure gold. 18 carat gold is $\frac{3}{4}$ pure gold and 20 carat gold is $\frac{5}{6}$ pure gold. The ratio of the pure gold in 18 carat gold to the pure gold in 20 carat gold is :

(a) 3 : 8 (b) 9 : 10

(c) 15 : 24 (d) 8 : 5

22. If $\frac{y}{x-z}=\frac{y+x}{z}=\frac{x}{y}$, then find $x : y : z$.

(a) 1 : 2 : 3 (b) 3 : 2 : 1

(c) 4 : 2 : 3 (d) 2 : 4 : 7

23. Salaries of A, B and C were in the ratio 3 : 5 : 7, respectively. If their salaries were increased by 50%, 60% and 50% respectively, what will be the new ratio of the their respective new salaries?

(a) 4 : 5 : 7 (b) 3 : 6 : 7

(c) 4 : 15 : 18 (d) 9 : 16 : 21

24. The average score of boys in an examination of a school is 71 and that of the girls is 73. The average score of the whole school in that examination is 71.8. Find the ratio of the number of boys to the number of girls that appeared in the examination.

(a) 4 : 5 (b) 3 : 2

(c) 3 : 5 (d) 5 : 2

25. Two casks of 48 L and 42 L are filled with mixtures of wine and water, the proportions in the two casks being respectively 13 : 7 and 18 : 17. If the contents of the two casks be mixed and 20 L of water is added to the whole, what will be the proportion of wine to water in the resultant solution?

(a) 21 : 31 (b) 12 : 13

(c) 13 : 12 (d) None of these

26. What amounts (in litres) of 90% and 97% pure acid solutions are mixed to obtain 21 L of 95% pure acid solution?

(a) 6 and 15 L (b) 14 and 15 L

(c) 12 and 15 L (d) 13 and 12 L

27. Arvind began a business with ₹ 550 and was joined afterwards by Brij with ₹ 330. When did Brij join, if the profits at the end of the year were divided in the ratio 10 : 3?

(a) After 4 months (b) After 6 months

(c) After 4.5 months (d) None of these

28. A, B and C are partners. A receives 9/10 of the profit and B and C share the remaining profit equally. A's income is increased by ₹ 270 when the profit rises from 12 to 15%. Find the capital invested by B and C each

(a) ₹ 5000 (b) ₹ 1000

(c) ₹ 500 (d) ₹ 1500

29. A fort had provision of food for 150 men for 45 days. After 10 days, 25 men left the fort. The number of days for which the remaining food will last, is

(a) $29\frac{1}{5}$ (b) $37\frac{1}{4}$

(c) 42 (d) 54

30. In a mixture of 45 L, the ratio of milk and water is 2 : 1. If this ratio is to be 3 : 2, the quantity of water to be further added is

(a) 3 L (b) 5 L

(c) 8 L (d) None of these

31. If 40% of a number is equal to two-third of another number, what is the ratio of first number to the second number?

(a) 2 : 5 (b) 3 : 7

(c) 5 : 3 (d) 7 : 3

32. If the cost of printing a book of 320 leaves with 21 lines on each page and on an average 11 words in each line is ₹ 19, find the cost of printing a book with 297 leaves, 28 lines on each page and 10 words in each line.

(a) ₹ $22\frac{3}{8}$ (b) ₹ $20\frac{3}{8}$

(c) ₹ $21\frac{3}{8}$ (d) ₹ $21\frac{3}{4}$

33. A and B entered into a partnership with investments of ₹ 15000 and ₹ 40000 respectively. Aftere 3 months A left from the business, at the same time C joins with ₹ 30000. At the end of 9 months, they got ₹ 7800 as profit. Find the share of B.

(a) ₹ 4800 (b) ₹ 600

(c) ₹ 2400 (d) ₹ 1200

34. The third proportional to $(x^2 - y^2)$ and $(x - y)$ is :

(a) $(x + y)$ (b) $(x - y)$

(c) $\frac{x+y}{x-y}$ (d) $\frac{x-y}{x+y}$

35. The sides of a triangle are in the ratio $\frac{1}{2}:\frac{1}{3}:\frac{1}{4}$ and its perimeter is 104 cm. The length of the longest side is

(a) 52 cm (b) 48 cm

(c) 32 cm (d) 26 cm

36. Three friends *A, B* and *C* started a business by investing a sum of money in the ratio of 5 : 7 : 6. After 6 months *C* withdraws half of his capital. If the sum invested by '*A*' is ₹ 40,000, out of a total annual profit of ₹ 33,000, *C*'s share will be

(a) ₹9,000 (b) ₹12,000
(c) ₹11,000 (d) ₹10,000

37. The numbers of students speaking English and Hindi are in the ratio of 4:5. If the number of students speaking English increased by 35% and that speaking Hindi increased by 20%, what would be the new respective ratio?

(a) 19:20 (b) 7:8
(c) 8:9 (d) 9:10

38. The ratio of males and females in a city is 7 : 8 and the percentage of children among males and females is 25% and 20% respectively. If the number of adult females in the city is 156800 what is the total population?

(a) 245000 (b) 367500
(c) 196000 (d) 171500

39. *A*, *B* and *C* started a business with a total investment of ₹ 72000. *A* invests ₹ 6000 more than *B* and *B* invests ₹ 3000 less than *C*. If the total profit at the end of a years is ₹ 8640, find A's share.

(a) ₹3240 (b) ₹2520
(c) ₹2880 (d) ₹3360

40. *A*, *B* and *C* enter into a partnership. They invest ₹ 40,000, ₹ 80,000 and ₹ 1,20,000 respectively. At the end of the first year, *B* withdraws ₹ 40,000, while at the end of the second year, *C* withdraws ₹ 80,000. In what ratio will the profit be shared at the end of 3 years?

(a) 2 : 3 : 5 (b) 3 : 4 : 7
(c) 4 : 5 : 9 (d) None of these

41. Incomes of two companies *A* and *B* are in the ratio of 5 : 8. Had the income of company *A* been more by ₹ 25 lakh, the ratio of their incomes would have been 5 : 4. What is the income of company *B*?

(a) ₹80 lakh (b) ₹50 lakh
(c) ₹40 lakh (d) ₹60 lakh

42. Abhishek started a business investing ₹ 50,000. After one year he invested another ₹ 30,000 and Sudin also joined him with a capital of ₹ 70,000. If the profit earned in three years from the starting of business was ₹ 87,500, then find the share of Sudin in the profit.

(a) ₹37,500 (b) ₹35,000
(c) ₹38,281 (d) ₹52,500

43. In 1 kg mixture of sand and iron, 20% is iron. How much sand should be added so that the proportion of iron becomes 10%?

(a) 1 kg (b) 200 gms
(c) 800 gms (d) 1.8 kg

44. *A* started a business with ₹ 21,000 and is joined afterwards by *B* with ₹ 36,000. After how many months did *B* join if the profits at the end of the year are divided equally?

(a) 3 (b) 4
(c) 5 (d) 6

45. When 30 percent of a number is added to another number the second number increases to its 140 per cent. What is the ratio between the first and the second number?

(a) 3:4 (b) 4:3
(c) 3:2 (d) None of these

46. The ratio of number of ladies to gents at a party was 1 : 2, but when 2 ladies and 2 gents left, the ratio became 1 : 3. How many people were originally present at the party?

(a) 6 (b) 9
(c) 12 (d) 10

47. A bag contains an equal number of one rupee, 50 paise and 25 paise coins respectively. If the total value is ₹ 35, how many coins of each type are there?

(a) 20 coins (b) 30 coins
(c) 28 coins (d) 25 coins

48. *A* and *B* invest ₹ 3,000 and ₹ 4,000 in a business. *A* receives ₹ 10 per month out of the profit as a remuneration for running the business and the rest of profit is divided in proportion to the investments. If in a year '*A*' totally receives ₹ 390, what does *B* receive?

(a) ₹375 (b) ₹360
(c) ₹350 (d) ₹260

49. If $f(x)=\frac{(x+1)}{(x-1)}$, then the ratio of x to $f(y)$ where $y=f(x)$ is

(a) $x:y$ (b) $x^2:y^2$
(c) 1 : 1 (d) $y:x$

50. If $\frac{a}{b+c}=\frac{b}{c+a}=\frac{c}{a+b}$, then each fraction is equal to

(a) $(a+b+c)^2$ (b) 1/2
(c) 1/4 (d) 0

51. If $a:b=c:d$ then the value of $\frac{a^2+b^2}{c^2+d^2}$ is

(a) 1/2 (b) $\frac{a+b}{c+d}$
(c) $\frac{a-b}{c-d}$ (d) $\frac{ab}{cd}$

52. In Ramnagar Colony, the ratio of school going children to non-school going children is 5 : 4. If in the next year, the number of non-school going children is increased by 20%, making it 35,400, what is the new ratio of school going children to non-school going children?

(a) 4:5 (b) 3:2
(c) 25:24 (d) None of these

53. If ₹ 1066 is divided among *A*, *B*, *C* and *D* such that $A:B=3:4$, $B:C=5:6$ and $C:D=7:5$, who will get the maximum?

(a) B (b) A
(c) C (d) D

54. The ratio of the ages of A and B seven years ago was 3 : 4 respectively. The ratio of their ages nine years from now will be 7 : 8 respectively. What is B's age at present ?
[*SBI Clerk-June-2012*]
(a) 16 years (b) 19 years
(c) 28 years (d) 23 years
(e) None of these

55. The respective ratio between the present ages of father, mother and daughter is 7 : 6 : 2. The difference between mother's and the daughter's age is 24 years. What is the father's age at present ? [*SBI Clerk-2012*]
(a) 43 years (b) 42 years
(c) 39 years (d) 38 years
(e) None of these

56. Number of students studying in colleges *A* and *B* are in the ratio of 3 : 4 respectively. If 50 more students join college *A* and there is no change in the number of students in college *B*, the respective ratio becomes 5 : 6. What is the number of students in college *B* ? [*SBI Clerk-2014*]
(a) 450 (b) 500
(c) 400 (d) 600
(e) None of these

57. A certain sum of money is distributed to A and B in the ratio 2 : 5. If A received ₹100, then the money received by B is
[*SSC-Sub. Ins.-2012*]
(a) ₹200 (b) ₹150
(c) ₹250 (d) ₹300

58. A man leaves ₹ 12,600 to be divided among 7 sons, 3 daughters and 5 nephews. If each daughter receives three times as much as each nephew and each son seven times as much as each nephew, then each daughter's share is
[*SSC-Sub. Ins.-2012*]
(a) ₹ 700 (b) ₹ 650
(c) ₹ 600 (d) ₹ 750

59. The proportion of acid and water in three samples is 2 : 1, 3 : 2 and 5 : 3. A mixture containing equal quantities of all three samples is made. The ratio of water and acid in the mixture is : [*SSC-Sub. Ins.-2013*]
(a) 120 : 133 (b) 227 : 133
(c) 227 : 120 (d) 133 : 227

60. If x : y ::2 : 3 and 2 : x :: 4 : 8 the value of y is
[*SSC-Sub. Ins.-2014*]
(a) 6 (b) 8
(c) 4 (d) 12

61. ₹ 730 were divided among A, B, C in such a way that if A gets ₹ 3, then B gets ₹ 4 and if B gets ₹ 3.50 then C gets ₹ 3. The share of B exceeds that of C by [*SSC-Sub. Ins.-2014*]
(a) ₹ 30 (b) ₹ 40
(c) ₹ 70 (d) ₹ 210

62. A certain amount of money is divided among x, y and z. If x receives 25% more than y and y receives 25% less than z, then x : y : z is equal to [*SSC-MT-2013*]
(a) 12 : 10 : 11 (b) 14 : 12 : 13
(c) 15 : 12 : 16 (d) 10 : 9 : 12

63. If 10% of *x* is the same as 20% of *y*, then *x* : *y* is
[*SSC-MT-2013*]
(a) 5 : 1 (b) 1 : 2
(c) 3 : 1 (d) 2 : 1

64. In a school, the ratio of boys to girls is 4 : 3 and the ratio of girls to teachers is 8 : 1. The ratio of student to teachers is :
[*SSC 10+2-2012*]
(s) 56 : 3 (b) 55 : 1
(c) 49 : 3 (d) 56 : 1

65. A, B and C are batsmen. The ratio of the runs scored by them in a certain match are given below:
A : B = 5 : 3 and B : C = 4 : 5. In all they scored 564 runs. The number of runs scored by B is: [*SSC 10+2-2012*]
(a) 124 (b) 104
(c) 114 (d) 144

66. The ratio of age of two boys is 5 : 6. After two years the ratio will be 7 : 8. The ratio of their ages after 12 years will be
[*SSC 10+2-2013*]
(a) 11/12 (b) 22/24
(c) 15/16 (d) 17/18

67. A invests ₹ 64,000 in a business. After few months B joined him with ₹ 48,000. At the end of year, the total profit was divided between them in the ratio 2 : 1. After how many months did B join ? [*SSC 10+2-2013*]
(a) 7 (b) 8
(c) 4 (d) 6

68. If $\frac{x}{y}=\frac{4}{5}$, then the value of $\left(\frac{4}{7}+\frac{2y-x}{2y+x}\right)$ is
[*SSC 10+2-2014*]
(a) $\frac{3}{7}$ (b) $1\frac{1}{7}$
(c) 1 (d) 2

69. Ram left $\frac{1}{3}$ of his property to his widow and $\frac{3}{5}$ of the remainder to his daughter. He gave the rest to his son who received ₹ 6,400. How much was his original property worth?
[*SSC 10+2-2014*]
(a) ₹ 16,000 (b) ₹ 32,000
(c) ₹ 24,000 (d) ₹ 1,600

70. A total profit of ₹ 3,600 is to be distributed amongst A, B and C such that A : B = 5 : 4 and B : C = 8 : 9. The share of C in the profit is [*SSC 10+2-2014*]
(a) ₹ 1,200 (b) ₹ 1,500
(c) ₹ 1,650 (d) ₹ 1,700

71. Three friends divide ₹ 624 among themselves in the ratio $\frac{1}{2}:\frac{1}{3}:\frac{1}{4}$; the share of the third friend is [*SSC 10+2-2014*]
(a) ₹ 288 (b) ₹ 192
(c) ₹ 148 (d) ₹ 144

72. Two numbers are in the ratio 3 : 5. If 9 is subtracted from each, the new numbers are in the ratio 12 : 23. The small number is [*SSC 10+2-2014*]

(a) 27 (b) 33
(c) 49 (d) 55

73. If $x : y = 5 : 2$, then $(8x + 9y) : (8x + 2y)$ is [*SSC 10+2-2014*]

(a) 22 : 29 (b) 26 : 61
(c) 29 : 22 (d) 61 : 26

74. A is twice as fast as B and B is thrice as fast as C is. The journey covered by C in 1½ hours will be covered by A in [*SSC 10+2-2014*]

(a) 15 minutes (b) 20 minutes
(c) 30 minutes (d) 1 hour

75. If $\frac{x}{xa+yb+zc} = \frac{y}{ya+zb+xc} = \frac{z}{xa+xb+yc}$ and $x+y+z \neq 0$, then each ratio is [*SSC 10+2-2014*]

(a) $\frac{1}{a-b-c}$ (b) $\frac{1}{a+b-c}$

(c) $\frac{1}{a-b+c}$ (d) $\frac{1}{a+b+c}$

76. In the expression xy^2, the values of x and y are each decreased by 25%. The value of the expression is decreased by [*SSC 10+2-2014*]

(a) $\frac{37}{64}$ of its value (b) $\frac{1}{2}$ of its value

(c) $\frac{27}{64}$ of its value (d) $\frac{3}{4}$ of its value

77. If the numerator of a fraction is increased by 300% and the denominator is increased by 200%, the resultant fraction is $\frac{4}{15}$. What is the original fraction ? [*IBPS Clerk-2012*]

(a) $\frac{3}{5}$ (b) $\frac{4}{5}$

(c) $\frac{2}{5}$ (d) $\frac{1}{5}$

(e) None of these

78. The ratio between Gloria's and Sara's present ages is 4 : 7 respectively. Two years ago the ratio between their ages was 1 : 2 respectively. What will be Sara's age three years hence ? [*IBPS Clerk-2012*]

(a) 17 years (b) 14 years
(c) 11 years (d) 8 years
(e) None of these

79. The respective ratio of salaries of A and B is 8 : 7. If the salary of B increases by 20% and the salary of A increases by 21%, the new ratio becomes 121 : 105 respectively. What is A's salary? [*IBPS Clerk-2013*]

(a) ₹22560 (b) ₹21600
(c) ₹20640 (d) ₹23040
(e) Cannot be determined

80. A, B and C started a business by investing ₹12800, ₹16800 and ₹9600 respectively. If after 8 months B received ₹13125 as his share of profit, what amount did C get as his share of profit? [*IBPS Clerk-2013*]

(a) ₹7800 (b) ₹7150
(c) ₹7750 (d) ₹8250
(e) ₹7500

81. 12 yrs hence the ratio between the ages of A and B will be 3 :4 respectively. The present age of A is $3\frac{3}{4}$ times of C's present age. If C's present age is 10 yrs, then what is B's present age? (in years) [*IBPS Clerk-2013*]

(a) 48 (b) 46
(c) 60 (d) 54
(e) 36

82. M, N, O and P divided ₹ 44352 among themselves. M took $\frac{3}{8}$th of the money, N took $\frac{1}{6}$th of the remaining amount and rest was divided among O and P in the ratio of 3 : 4 respectively. How much did O get as his share? [*IBPS Clerk-2013*]

(a) ₹9600 (b) ₹10600
(c) ₹10300 (d) ₹8700
(e) ₹9900

83. A and B are two numbers. 6 times of square of B is 540 more than the square of A. If the respective ratio between A and B is 3 : 2, what is the value of B? [*IBPS Clerk-2013*]

(a) 10 (b) 12
(c) 16 (d) 8
(e) 14

Level - II

1. A man completes 5/8 of a job in 10 days. At this rate, how many more days will it take him to finish the job?

(a) 5 (b) 6
(c) 7 (d) $7\frac{1}{2}$

2. ₹ 1104 is divided between 3 men, 4 women and 6 boys, so that the share of a man, a woman and a boy are in the proportion of 3 : 2 : 1. How much does each boy get?

(a) ₹ 48 (b) ₹ 64
(c) ₹ 96 (d) Cannot be determined

3. Seats of Physics, Chemistry and Mathematics in a school are in the ratio 4 : 5 : 6. There is a proposal to increase these seats by 75 in each department. What were the total number of seats in the school finally?

(a) 600 (b) 750
(c) 900 (d) None of these

4. 60 kg of an alloy A is mixed with 100 kg of alloy B. If alloy A has lead and tin in the ratio 3 : 2 and alloy B has tin and copper in the ratio 1 : 4, then the amount of tin in the new alloy is

(a) 36 kg (b) 44 kg
(c) 53 kg (d) 80 kg

5. A, B and C started a business. A invests $\frac{1}{2}$ capital for $\frac{1}{4}$ time, B invests $\frac{1}{8}$ capital for $\frac{1}{2}$ time and C invests the remaining capital for whole time. Find the share of B in the total profit of ₹ 9900.

(a) ₹ 2200 (b) ₹ 1100
(c) ₹ 6600 (d) ₹ 4400

6. Two jars having a capacity of 3 and 5 litres respectively are filled with mixtures of milk and water. In the smaller jar 25% of the mixture is milk and in the larger 25% of the mixture is water. The jars are emptied into a 10 litre cask whose remaining capacity is filled up with water. Find the percentage of milk in the cask.

(a) 55% (b) 50%
(c) 45% (d) None of these

7. A, B, C subscribe ₹ 50,000 for a business. A subscribes ₹ 4000 more than B and ₹ 5000 more than C. Out of a total profit of ₹ 35,000, A receives :

(a) ₹ 8,400 (b) ₹ 11,900
(c) ₹ 13,600 (d) ₹ 14,700

8. There is a ratio of 5 :4 between two numbers. If 40 percent of the first number is 12 then what would be the 50 percent of the second number?

(a) 12 (b) 24
(c) 18 (d) None of these

9. In a partnership, A invests $\frac{1}{6}$ of the capital for $\frac{1}{6}$ of the time, B invests $\frac{1}{3}$ of the capital for $\frac{1}{3}$ of the time and C, the rest of the capital for whole time. Find A's share of the total profit of ₹ 2,300.

(a) ₹ 100 (b) ₹ 200
(c) ₹ 300 (d) ₹ 400

10. A and B rent a pasture for 10 months; A puts in 80 cows for 7 months. How many can B put in for the remaining 3 months, if he pays half as much again as A?

(a) 120 (b) 180
(c) 200 (d) 280

11. The resistance of a wire is proportional to its length and inversely proportional to the square of its radius. Two wires of the same material have the same resistance and their radii are in the ratio 9 : 8. If the length of the first wire is 162 cms., find the length of the other.

(a) 64 cm. (b) 120 cm.
(c) 128 cm. (d) 132 cm.

12. A diamond falls and breaks into three pieces whose weights are in the ratio 1 : 3 : 6. The value of the diamond is proportional to the square of its weight. If the original value is ₹ 30,000, What is the loss in the in the value due to the breakage?

(a) ₹ 13, 800 (b) ₹ 16,200
(c) ₹ 18, 600 (d) ₹ 19, 400

13. When a bus started from the first stop, the number of male passengers to the number of female passengers was 3 : 1. At the stop 16 passengers get down and 6 more female passengers get into. Now the ratio of the male to female passengers becomes 2 : 1. What was the total number of passengers in the bus when it started from the first stop?

(a) 64 (b) 48
(c) 54 (d) 72

14. In three vessels, the ratio of water and milk is 6 : 7, 5 : 9 and 8 : 7, respectively. If the mixtures of the three vessels are mixed together, then what will be the ratio of water and milk?

(a) 2431 : 3781 (b) 3691 : 4499
(c) 4381 : 5469 (d) None of these

15. In two alloys, the ratio of iron and copper is 4 : 3 and 6 : 1, respectively. If 14 kg of the first alloy and 42 kg of the second alloy is mixed together to form a new alloy, then what will be the ratio of iron to copper in the new alloy?

(a) 11 : 3 (b) 11 : 8
(c) 8 : 1 (d) None of these

16. Mixture of milk and water has been kept in two separate containers. Ratio of milk to water in one of the containers is 5 : 1 and that in the other container is 7 : 2. In what ratio should the mixtures of these two containers be added together so that the quantity of milk in the new mixture may become 80%?

(a) 3 : 2 (b) 2 : 3
(c) 4 : 5 (d) None of these

17. Three containers of capacity 20 L, 5 L and 9 L contain mixture of milk and water with milk concentrations 90%, 80% and 70% respectively. The contents of three containers are emptied into a large vessel. What is the approximate ratio of milk to water in the resultant mixture?

(a) 3 : 1 (b) 4 : 1
(c) 5 : 1 (d) 2 : 1

18. Ratio of the earnings (in ₹) of A and B is 4 : 7. If the earnings of A increase by 50% and those of B decrease by 25%, the new ratio of their earnings becomes 8 : 7. How much is A earning?

(a) ₹ 28000 (b) ₹ 21000
(c) ₹ 26000 (d) Data inadequate

19. In the famous Bhojpur island, there are four men for every three women and five children for every three men. How many children are there in the island if it has 531 women?

(a) 454 (b) 1180
(c) 1070 (d) 389

20. If $a/b = 1/3, b/c = 2, c/d = 1/2, d/e = 3$ and $e/f = 1/4$, then what is the value of abc/def?

(a) 3/8 (b) 27/8
(c) 3/4 (d) 27/4

21. When the numerator and the denominator of a fraction are increased by 1 and 2 respectively, the fraction becomes $\frac{2}{3}$, and when the numerator and the denominator of the same fraction are increased by 2 and 3 respectively, the fraction becomes $\frac{5}{7}$. What is the original fraction? [*SBI PO-2011*]

(a) $\frac{5}{6}$ (b) $\frac{3}{4}$
(c) $\frac{3}{5}$ (d) $\frac{6}{7}$
(e) None of these

22. When X is subtracted from the numbers 9,15 and 27, the remainders are in continued proportion. What is the value of X ? [*IBPS-PO-2012*]

(a) 8 (b) 6
(c) 4 (d) 5
(e) None of these

23. A certain amount was to be distributed among A, B and C in the ratio 2 :3 :4 respectively, but was erroneously distributed in the ratio 7:2:5 respectively. As a result of this, B got ₹40 less. What is the amount ? [*IBPS-PO-2012*]

(a) ₹210/- (b) ₹270/-
(c) ₹230/- (d) ₹280/-
(e) None of these

24. ₹ 73,689/- are divided between A and B in the ratio 4 : 7. What is the difference between thrice the share of A and twice the share of B ? [*IBPS-PO-2012*]

(a) ₹36,699/- (b) ₹46,893/-
(c) ₹20,097/- (d) ₹26,796/-
(e) ₹13,398/-

25. If the numerator of a fraction is increased by 20% and the denominator is increased by 25%, the fraction obtained is $\frac{3}{5}$. What was the original fraction? [*IBPS-PO-2013*]

(a) $\frac{5}{7}$ (b) $\frac{4}{7}$
(c) $\frac{3}{8}$ (d) Cannot be determined
(e) None of these

26. The respective ratio between the present ages of son, mother, father and grandfather is 2 : 7 : 8 : 12. The average age of son and mother is 27 yrs. What will be mother's age after 7 yrs? [*IBPS-PO-2013*]

(a) 40 yrs (b) 41 yrs
(c) 48 yrs (d) 49 yrs
(e) None of these

27. The prize money of ₹ 1,800 is divided among 3 students A, B and C in such a way that 4 times the share of A is equal to 6 times the share of B, which is equal to 3 times the share of C. Then A's share is [*SSC CGL-2013*]

(a) ₹400 (b) ₹600
(c) ₹700 (d) ₹800

28. A man borrowed some money from a private organisation at 5% simple interest per annum. He lended 50% of this money to another person at 10% compound interest per annum and thereby the man made a profit of ₹ 13,205 in 4 years. The man borrowed [*SSC CGL-2014*]

(a) ₹80,000 (b) ₹1,00,000
(c) ₹1,20,000 (d) ₹1,50,000

29. A, B and C enter into a partnership with their capitals in the $\frac{7}{2} : \frac{4}{3} : \frac{6}{5}$. After 4 months, A increases his share 50%. If the total profit at the end of the year was ₹ 2,16,000, then B's share in the profit was [*SSC CGL-2014*]

(a) ₹22,000 (b) ₹24,000
(c) ₹30,000 (d) ₹40,000