



## **Arithmetic Questions for IBPS RRB PO and Clerk 2025**

Q1. P and Q can complete a work together in 20 days. Q is two times more efficient than P. If 40% of the work is done by P & Q together and the remaining work is done by R, the work gets completed in 26 days. Find in how many days R will complete the whole work?

- (a) 25 days
- (b) 24 days
- (c) 20 days
- (d) 35 days
- (e) 30 days

Q2. The cost price of a pen is 60% less than cost price of a notebook. The pen was sold at 40% profit and a notebook was sold at 15% loss. If the difference between their selling price is Rs. 43.5, then find the cost price of the pen?

- (a) Rs. 80
- (b) Rs. 60
- (c) Rs. 150
- (d) Rs. 40
- (e) Rs. 100

Q3. A boat can cover X km upstream in 16 minutes and the same distance in still water in 12 minutes. If the boat takes 't' minutes to cover same distance in downstream, then find 't+0.4'?

- (a) 9.6
- (b) 8.4
- (c) 10
- (d) 8.8
- (e) 10.8

Q4. The difference between the compound interest and the simple interest received in 3 years on a sum of Rs. 20000 is Rs. 1040. If the rate of interest for the 1<sup>st</sup> and 2<sup>nd</sup> year is 10% and 20% respectively for both compound interest and simple interest, then find the rate of interest for the 3<sup>rd</sup> year?

(a)  $12\frac{1}{2}\%$ (b) 10% (c) 15% (d) 5% (e)  $11\frac{1}{9}\%$ 







Q5. P and Q entered into a partnership invested Rs. 9000 and Rs. 6000 respectively. After 6 months, P withdrew Rs. 5000 while Q invested Rs. 3000 more. After 3 more months, R joins the business with a capital of Rs. 22000. The share of Q in the total profit exceeds that of R by how much, if the total profit after one year is Rs. 35,100.

- (a) Rs. 2300
- (b) Rs. 3600
- (c) Rs. 3800
- (d) Rs. 4200
- (e) Rs. 4000

Q6. The average weight of 16 coconuts is 1.5 kg. If 5 watermelons are also added, then the average weight increases by 0.5 kg. What is the total weight of 5 watermelons?

- (a) 22 kg
- (b) 15 kg
- (c) 20.5 kg
- (d) 18 kg
- (e) 24 kg

Q7. A car covers a distance from point A to point B at an average speed of 32 km/hr and return journey from point B to point A at an average speed of 60 km/hr. If the car takes 11.5 hours for the whole journey, then find the distance between point A and point B?

- (a) 480 km
- (b) 360 km
- (c) 240 km
- (d) 180 km
- (e) 300 km

Q8. A train 220 meters long passes a platform in 40 seconds. If its speed is increased by 3 meters/seconds, then it crosses a pole in 11 seconds. Find the length of platform?

- (a) 380 meters
- (b) 420 meters
- (c) 350 meters
- (d) 460 meters
- (e) 450 meters

Q9. Mixture of milk and water has 7 liters of water. When 2 liters of milk and 11 liters of water are added to the mixture then concentration of milk in mixture becomes 80%. Find total quantity of initial mixture?

- (a) 68 liters
- (b) 85 liters
- (c) 90 liters
- (d) 77 liters





Q10. Two years ago Raju's age was 75% of his sister, Rita's age at that time. After two years, Rita's age will be 33 1/3% of her father's age. Average age of Rita's father and mother is 31 yrs. If Rita's mother's age is 28 yrs then what is the present age of Raju?

- (a) 10 years
- (b) 6 years
- (c) 8 years
- (d) 12 years
- (e) 14 years

Q11. A man invests Rs X in simple interest at 15.032% p.a. for 3 years and 15 days and receives interest of Rs 2339.94. If he invests Rs (X+799.98) in compound interest at 20.09% for 2 years and 12 days, then find the amount (in Rs) received (approximately).

(a) 8068

(b) 8064

(c) 8460

(d) 8640

(e) 8604

Q12. The ratio of the radius to the height of a cylinder is 7:5, respectively. If the curved surface area of the cylinder is 3520 sq. cm and the height of the cylinder is equal to the side of a square, then find the perimeter of the square.

- (a) 98 cm
- (b) 64 cm
- (c) 112 cm
- (d) 77 cm
- (e) 80 cm

Q13. A vessel contains 120.15 liters of mixture of milk and water, and the quantity of water is 24.99% of the total mixture. If 39.99 liters of mixture are taken out and X liters of water are added to the mixture, then the ratio of milk to water becomes 1:1. Find the approximately value of X.

- (a) 25
- (b) 40
- (c) 45
- (d) 50
- (e) 30

Q14. In an exam, students scored 44.87% and failed 30.09 marks. Another student scored 70.12%, and he scored 19.90 marks more than the passing marks. Find the maximum marks of the exam (approximate).

3	www.bankersadda.com		<u>Test Prime</u>
(e) 200			
(d) 120			
(c) 240			
(b) 150			
(a) 180			





Q15. The cost price of a pen is Rs 200 more than the cost price of a pencil. If pen sold at 10% on loss and pencil sold at 50% on profit and the selling price of pen and pencil become equal, then find the cost price of the pen (In Rs).

(a) 200

(b) 300

(c) 250

(d) 650

(e) 500

Q16. A and B started a business with investments of Rs 4000 and Rs 5000, respectively. After eight months, A invests Rs X more, and at the end of the year, the profit share of A is 5/6 of the profit share of B. Find the value of X.

(a) 250

(b) 200

(c) 500

(d) 750

(e) 1000

Q17. The time taken by a boat to cover 360 km upstream is 4.5 hours more than it to cover the same distance downstream. If the ratio of the speed of the boat in still water to the speed of the stream is 9:1, then find the speed of the stream (in km/hr).

(a) 18

(b) 12

(c) 2

(d) 4

(e) 6

Q18. The length of a train is 240 meters can cross a pole and a bridge in 9.6 seconds and 16 seconds, respectively. If the length of a platform is 60 meters less than the bridge, then in how many seconds the train crosses the platform?

(a) 13.5 (b) 14.2 (c) 12.4

(d) 13.6

(e) 15.6

Q19. Pipe A and pipe B can fill a tank in 18 minutes and 24 minutes, respectively. If the efficiency of pipe C (outlet pipe) is 33.33% less than that of pipe B, then in how many minutes pipes A and C together fill the whole tank?

(a) 34 (b) 12 (c) 28 (d) 36 (e) 45 T





**Q20.** The ratio of present age of 'A' to her mother is 3 : 4 and the ratio of present ages of A's mother to her brother is 9 : 4. If A's brother is 11 years younger than A, then find the age of her mother? (a) 36 years

(b) 22 years

- (c) 26 years
- (d) 46 years
- (e) 56 years

Q21. There are some cards in a box, and the numbers written on the cards range from 1 to 60. If one card is taken from the box, then find the probability that the card taken out is a multiple of seven.

(a) 11/15
(b) 7/15
(c) 4/15
(d) 1/15

(e) 2/15

Q22. A man spends 40% of his monthly salary on travelling and 25% of the remaining monthly salary on rent. He then spends his remaining monthly salary on food and FD in the ratio of 2:3 respectively. If the difference between the amount spent on FD and travelling is Rs 2600, then find the amount spend on food (in Rs).

- (a) 1800
- (b) 3600
- (c) 2400
- (d) 3250
- (e) 4000

Q23. A and B together can complete a work in 6 days. If B takes 16 days more than A to complete the work, then in how many days can A can complete the whole work?

- (a) 24 (b) 8 (c) 9
- (d) 12
- (u) 12
- (e) 15

Q24. A man spends 1/5<sup>th</sup> of his monthly salary on house rent and 1/4<sup>th</sup> of the remaining salary on his food. From his remaining monthly salary, he spends 5/9<sup>th</sup> on travelling and saves remaining he saved. If the difference between the amount he saved and the amount he spends on house rent is Rs 6000, then find the monthly salary of the man (in Rs)?

T

(a) 90000 (b) 110000

- (c) 100000 (d) 80000
- (e) 120000





Q25. Rs Y is distributed between Jack, Kolvin, Love, and Mosu. The amount received by Jack is  $5/4^{\text{th}}$  of amount received by Love and the amount received by Kolvin is  $2/5^{\text{th}}$  less than the amount received by Jack. If the amount received by Mosu is Rs 1000 less than that of Love and the difference between the amount received by Jack and Mosu is Rs 2000, then find the value of Y (in Rs.)?

(a) 20000

(b) 18000

(c) 10000

(d) 12000

(e) 15000

Q26. The time taken by a boat to cover 240 km upstream in 30 hours and the boat can cover Y+8 km downstream in 24 hours. If the speed of the boat in still water is 400% more than the speed of the stream, then find the value of Y (in km/hr)?

(a) 288

(b) 280

(c) 232

(d) 252

(e) 312

Q27. Five years hence, the age of P is equal to the age of Q seven years ago. After four years, the ratio of the ages of Q to P 3 : 2. Find the sum of the present ages of P and Q (in years).

- (a) 56 years
- (b) 48 years
- (c) 52 years
- (d) 50 years

(e) 54 years

Q28. In a mixture of milk and water, the quantity of water is 1/9<sup>th</sup> of total mixture. If 54 liters of mixture are removed and 10 liters of water are added to the mixture, then the quantity of milk in the resultant mixture becomes 32 liters. Find the initial quantity of water in the mixture?

(a) 5 liters

(b) 15 liters

(c) 10 liters

(d) 20 liters

(e) 25 liters

Q29. Ram and Shyam started a business with investments of Rs 3600 and Rs (P-3600) respectively. After nine months, Ram left the business and his profit share is Rs 3600 out of the total profit of Rs 6800. Find the investment of Shyam (in Rs)?

T

(a) 6000
(b) 2400
(c) 3600
(d) 3000
(e) 4000





Q30. The average weight of 96 students in a group is 45 kg. If 24 more students joined the group, then the average weight decreased by 3 kg, then find the average weight of the 24 new students in the group?

- (a) 40
- (b) 36
- (c) 35
- (d) 25
- (e) 30

Q31. A man invested of Rs X in simple interest at Y% p.a. for two years and received interest of Rs 640. If he invested same sum in simple interest at 11% p.a. for 5 years and received amount of Rs 4960, then find the value of Y?

- (a) 12
- (b) 8
- (c) 15
- (d) 5
- (e) 10

Q32. The ratio of height to base of a right angle triangle is 5 : 3 and its area is 120 cm square. The length of a rectangle is X cm more than height of the triangle and breath of the rectangle is 15 cm. If the area of the rectangle is 360 cm square, then find the perimeter of the rectangle (in cm)? (a) 78

- (b) 70
- (c) 68
- (d) 76
- (e) 74

Q33. An article is mark up 40% over its cost price and it sold at 20% discount. If profit received on the article is Rs 180, then find the selling price when the same article is sold at profit of 12%?

- (a) 1760 Rs
- (b) 1720 Rs
- (c) 1640 Rs
- (d) 1680 Rs
- (e) 1600 Rs

Q34. In a company there are 600 male employees and 240 female employee, while the number of not promoted male and female employee are equal. If the ratio of promoted male to females employee is 14 : 5, then find the number of promoted employees (males & females) in the company?

company:		
(a) 760		
(b) 720		
(c) 680		
(d) 700		
(e) 640		
7	www.bankersadda.com	Test Prime





Q35. A man invested Rs 1800 at rate of 20% per annum on simple interest and he invested Rs (1800 - P) at rate of 30% per annum on compound interest. At the end of two years, the difference between both interests received by man is Rs 315. Find value of P?

- (a) Rs. 200
- (b) Rs. 300
- (c) Rs. 400
- (d) Rs. 100
- (e) Rs 500

Q36. Three partners A, B and C invested their amounts in ratio 7:5:3 respectively. At the end of six months, A withdraws some amount such that his total investment will be equal to C's initial investment. At the end of years, C received Rs 3600 as profit share. Find A's annual profit will be?

- (a) Rs. 6000
- (b) Rs. 7000
- (c) Rs. 4500
- (d) Rs. 9000
- (e) Rs 8000

Q37. A man sold two different articles A and B at 25% profit and 40% profit respectively. If total profit received is Rs. 178 and the cost price of A is Rs 120 less than B, then find the cost price of article B.

- (a) Rs. 310
- (b) Rs. 370
- (c) Rs. 320
- (d) Rs. 430
- (e) Rs 350

Q38. B's age is 10 years older than A. If the ratio of B's age 11 years hence and C's present age is 3:2. At present C's age is thrice A's age. What will be the age of C after 7 years?

- (a) 18 years
- (b) 23 years
- (c) 28 years
- (d) 25 years
- (e) 30 years

Q39. In covering a distance of 30 km, Amit takes 2 hours more than Suresh. If Amit doubles his speed, then he would take 1 hour less than Suresh. Find the Amit's speed?

(a) 6.25 km/hr
(b) 6 km/hr
(c) 7.5 km/hr
(d) 5 km/hr
(e) 4 km/hr



Test Prime





Q40. A barrel contains 56 liters of kerosene. It has two taps. One tap (A) draws 500 ml every 6 minutes. After first 5 liters are drawn from the barrel, the second tap (B) also starts, it draws 1 liter in every 5 minutes. How many hours will be taken in all to empty the tank?

- (a) 7 hours
- (b) 3 hours
- (c) 4 hours
- (d) 11 hours
- (e) 10.5 hours

Q41. A can complete a work in 12 days with a working of 8 hours per day. B can complete the same work in 8 days when working 10 hours a day. If A and B work together, working 8 hours a day, then in how many days can the work be completed?

(a) 93/11
(b) 71/11
(c) 62/11
(d) 60/11
(e) 65/11

Q42. Two boats A and B are at a distance of 48 km, and the ratio of speed of boat A to boat B in still water is 5 : 3. They both start to travel towards each other and meet after 2 hours. Find the downstream speed of boat A if boat A can cover 24 km upstream in 2 hours.

- (a) 9 km/hr
- (b) 12 km/hr
- (c) 15 km/hr
- (d) 18 km/hr
- (e) 21 km/hr

Q43. A container contains milk and water in ratio 5 : 3. 20 litre of this mixture is taken out and 10 liter of pure milk is added to the remaining mixture of the container. Then, ratio of milk to water in the container becomes 3 : 1. Find initial quantity of milk in the mixture (in liters)?

- (a) 40
- (b) 34 (c) 32.5
- (d) 25
- (e) 35
- (0) 55

Q44. The speed of train is 80% of the speed of a car which cover 2125 km in 17 hours. Find the speed of Bus whose speed is 20 km/hr less than speed of train?

T

(a) 80 km/hr
(b) 70 km/hr
(c) 60 km/hr
(d) 65 km/hr
(e) 85 km/hr





Q45. If area of rectangle is 4320 sq. cm and the length of rectangle is 20% more than its width, then find the diagonal of rectangle?

- (a) 15√17
- (b) 12√<u>61</u>
- (c)  $14\sqrt{21}$
- (d)  $10\sqrt{21}$
- (e)  $10\sqrt{3}$

Q46. There are five numbers a, b, c, d, and e. The average of a, b, and c is 34, and the d is 20 more than that of e. If the difference between the sum of a, b, & c and the sum of d & e is the cube of four, then find the sum of all the numbers.

- (a) 180
- (b) 120
- (c) 140
- (d) 156
- (e) None of these

Q47. Two types of rice which costs Rs. 2x per kg and Rs. 3x per kg of equal quantity are mixed and marked at Rs. 200/3 per kg. If shopkeeper earns 25% profit after allow a discount of Rs.20/3 on mixture, then find the value of x

- (a) 19.2
- (b) 16.2
- (c) 16.4
- (d) 14.3
- (e) 19.5

Q48. P and Q invested Rs 12000 and Rs 15000 in a business. After six-month P and Q withdraw all the investment and added Rs. 3x and Rs. x respectively. If at the end of a year, ratio of profit share of Q to total profit is 31 : 58 then find x?

- (a) Rs. 800 (b) Rs. 600
- (c) Rs. 500 (d) Rs. 240
- (u) RS. 240
- (e) Rs. 200

Q49. Ayush invested an equal sum in scheme A (simple interest) and Scheme B (compound interest) for two years at equal interest rate. If the sum of interest obtained from scheme A and scheme B is 41% of the amount invested in each schemes, then find the rate of interest.

- (a) 15%
- (b) 10%
- (c) 12%
- (d) CND (e) 20%





Q50. A completes the work in 15 days and B completes the same work in 7 days less than that of A. C completes the work in 4 days more than that the time taken by B to complete the work. If A and B work together for 5 days and remaining work is completed by C with half of his efficiency, then find the time taken to complete the whole work.

(a) 6

(b) 5.5

(c) 2

(d) 5

(e) 2.4

Q51. A boat covers 192 km in upstream in 6 hours and speed of boat in still water is 200% more than speed of stream. If the time taken by boat to cover D km in downstream is 225 minutes, then find D.

(a) 180

(b) 120

(c) 140

(d) 156

(e) None of these

Q52. The length and breadth of a rectangle is 5 m more and 5 m less than that of side of a square. Find the perimeter of the rectangle is how much more/less than that of the square (in m).

(a) 60

(b) 10

(c) 0

(d) CND

(e) None of these

Q53. A made a loss of 15% on selling his scooter. Had he sold it for Rs. 1500 more, he would have made a profit of 5%. If he marked the scooter at 20% above the cost price, then find the discount given.

(a) Rs. 2050 (b) Rs. 2625 (c) Rs. 2170

(d) Rs. 2350

(e) None of these

Q54. The ratio of length of train and bridge be 2:5 and time taken by train to cross a platform that is 140 m longer than that of train is 12 seconds. If the time taken by the train to cross the bridge is 14 seconds, then find the length of the bridge.

T

(a) 350 m (b) 210 m (c) 170 m (d) 140 m (e) 200 m

11





Q55. Present age of A is 50% more than that of B. Five years ago the age of A was 50% of the age of B ten years hence. Find the sum of their age after five years.

- (a) 30 years
- (b) 25 years
- (c) 45 years
- (d) 35 years
- (e) 20 years

Q56. The average weight of ten boys of a group is 40 kg. If the lightest and heaviest boy are not taken into the group, then average weight of remaining boys is 41 kg. If the weight of heaviest boy is 50 kg, find the weight of lightest boy. (in Kg)

- (a) 21 (b) 21.5
- (c) 22.5
- (d) 22
- (e) 20.5

Q57. A man spent 1/5<sup>th</sup> of his monthly income on house rent, 20% of the remaining income on Food. From the remaining income, the amount he saves is 28.57% more than the amount spent on clothing. If the difference between amount spent on Food and clothing is Rs.540, then find monthly income of man?

- (a) Rs. 4500
- (b) Rs. 5000
- (c) Rs. 6000
- (d) Rs.4000
- (e) Rs. 8000

Q58. The speed of boat in still water is 60% more than that of speed of stream and total time taken by boat to cover X km downstream and upstream together is 16 hours. Find the time taken by boat to cover 2X km in still water?

(a) 9.25 hours
(b) 8.25 hours
(c) 9.75 hours
(d) 11.75 hours
(e) 10.5 hours

Q59. 400 meters long train A and x meters long train B crosses a pole in 16 seconds and 52 seconds respectively. If speed of train A is 25% more than train B and both trains are running in opposite directions, then find the time (in seconds) taken by train A to cross train B?

12	www.bankersadda.com		Test Prime
(e) 32			
(d) 24			
(c) 48			
(b) 40			
(a) 36			
		-	





Q60. A shopkeeper marked up of article A at 8/5<sup>th</sup> of its cost price and sold it at the discount of 1/4<sup>th</sup> of marked price. The profit made by shopkeeper on article A is Rs.950. If the cost price of article B is 7/5<sup>th</sup> of cost price of article A and profit on both articles is same, then find the selling price of article B?

(a) Rs.9600

- (b) Rs.7200
- (c) Rs.6000
- (d) Rs.7600
- (e) Rs.8400

Q61. 8 men and 7 women can complete a piece of work in 15 days. If 2 men joined them, then they could finish the 4/5<sup>th</sup> of the same work in 10 days. Find the time taken by 21 women to complete the 200% of the same work?

(a) 80 days

(b) 30 days

(c) 40 days

(d) 60 days

(e) 50 days

Q62. A and B started a business and invested in the ratio of 4 : 5 respectively. After 6 months, A increased his investment by 100% and B withdrew 33.33% of his initial investment. At the end of a year, the total profit obtained by them is Rs. 6100. Find the difference between profit share of A and B?

(a) 1100 Rs.

(b) 1500 Rs.

(c) 1300 Rs.

(d) 1200 Rs.

(e) 1700 Rs.

Q63. A man invested Rs. X in scheme A at the rate of 20% p.a. on compound annually for two years. The total amount received from scheme A again invested by man in scheme B at the rate of 5% p.a. on simple interest for 4 years. If interest received from scheme B is Rs, 1584, then find X (in Rs.)?

(a) 6000
(b) 5500
(c) 5000
(d) 4500
(e) 6500

Q64. Four years hence, the average age of A and B will be 30 years. Six years ago, the ratio of age of A to B was 1 : 3. If the present age of C is equal to the difference between age of A and B, then find the ratio of present age of B and C respectively?

T

(a) 5 : 9
(b) 4 : 9
(c) 5 : 7
(d) 9 : 5
(e) 5 : 11





Q65. In a vessel, quantity of water is 40% of milk. If 84 liters of mixture is taken out from the vessel and 64 liter of waters is added in remaining mixture, then milk becomes 16.66% more than water in resultant mixture. Find initial quantity water in the mixture (in liters)?

- (a) 200 liters
- (b) 280 liters
- (c) 100 liters
- (d) 60 liters
- (e) 80 liters

Q66. The radius of circles X is 25% less than that of circle Y and the sum of circumference of circle X and diameter of circle Y is 188 cm. If the ratio of height of a right angle triangle to the radius of circle Y is 5 : 4 and area of triangle is 350 cm square, then find based of the triangle?

- (a) 20 cm
- (b) 16 cm
- (c) 18 cm
- (d) 24 cm
- (e) 30 cm

Q67. A can complete 25% of a work in 20 days and B can complete 50% of the work in 30 days. If A and B work alternatively started with B, then in how many days the whole work will be completed?

- (a) 68.5 days
- (b) 68 days
- (c) 69 days
- (d) 69.5 days
- (e) 70 days

Q68. A shopkeeper marked an article 120% above its cost price and allowed a 40% discount. He earned a profit of Rs 96. If the cost price of the article is increased by 25% and the shopkeeper sells the article at the previous price, then find the profit he earned.

- (a) Rs 20 (b) Rs 19 (c) Rs 15
- (d) Rs 14
- (e) Rs 21
- (e) Ks 21

Q69. A man invested Rs (P+50) in simple interest at 12% p.a. for four years and received interest of Rs 888. If he invested Rs 5000 in compound interest at (P/180) p.a. compound interest for 2 years, then find the amount he received after two years.

T

(a) Rs 5060
(b) Rs 6500
(c) Rs 6050
(d) Rs 6560
(e) None of these





Q70. The average of four positive numbers (a, b, c and d) is 80 and the sum of a, c and d is 260. If the ratio of b to d is 3:5 and a is 20 more than c, then find the average of a and d.

- (a) 80
- (b) 90
- (c) 95
- (d) 100
- (e) 75

Q71. A 750-meter-long train can cross a pole in 15 seconds, and it can cross a 250-meter-long platform in 't' seconds. Find the time taken by the train to cross a man who is running in the in the opposite direction of train with a speed of 't-10' m/sec.

- (a) 10 seconds
- (b) 12 seconds
- (c) 14.5 seconds
- (d) 11.5 seconds
- (e) 12.5 seconds

Q72. The speed of a boat in still water is 20% more than the upstream speed of the boat. If the boat can cover 280 km downstream in 10 hours, then find how much distance the boat covers in three hours in still water.

- (a) 72 km
- (b) 84 km
- (c) 80 km
- (d) 70 m
- (e) 64 km

Q73. The area of a semicircle is 16 sq. cm less than that of a square. If the perimeter of the square is 72 cm, then find the ratio of the radius of the semicircle to the side of the square.

- (a) 2:9
- (b) 3:8
- (c) 5:4
- (d) 7:9
- (e) 1:6

Q74. 280 liters mixture of milk and water in the ratio of 3:4, respectively. If one-fourth of the mixture is taken out and how much quantity of milk is added in the resultant mixture such that quantity of water becomes 50% of the final mixture?

(a) 20				
(b) 25				
(c) 30				
(d) 15				
(e) 40				
15	www.bankersadda.com	I	<u>Test Prime</u>	





Q75. A and B started a business with investment in the ratio of 6:11, respectively. If A and B invest for 22 months and 24 months, then the profit share of B is what percentage of A?

- (a) 50%
- (b) 120%
- (c) 200%
- (d) 100%
- (e) 75%

Q76. A train and a car start from the same point at same time in the same direction. The speed of train is 90 km/h and the speed of car is 60 km/h. After 't' hours, the train is 60 km ahead of the car. Find the total distance traveled by the car in 't+1' hours?

- (a) 60 km
- (b) 240 km
- (c) 100 km
- (d) 120 km
- (e) 180 km

Q77. A boat takes 20 hours to cover (X + 80) km in upstream and it takes 10 hours to cover X km in downstream. If speed of stream is 4 km/hr, then find the speed of boat in still water?

- (a) 20
- (b) 24
- (c) 18
- (d) 16
- (e) 30

Q78. A man invested Rs. P in scheme A on simple interest at the rate 20% p.a. for three years and he invested Rs. (P+6000) in scheme B on simple interest at the rate 20% p.a. for two years. If interest received by man from scheme B is Rs. 800 more than that of from scheme A, then find the value of P (in Rs.).

(a) 4000
(b) 8000
(c) 12000
(d) 16000
(e) 6000

Q79. The ratio of present age of A to B is 3:5 and the present age of B is 3/4<sup>th</sup> of C. Four years hence, the sum of age of B and C will be 78 years. Find the difference between present age (in years) of A and C?



- (c) 18
- (d) 24
- (e) 16





Q80. A, B and C entered into a business and invested in the ratio of 5 : 4 : 6 respectively. After four months, B and C left the business. At the end of a years, the total profit is Rs. 5000. Find the profit share of A.

- (a) 2000 Rs,
- (b) 3600 Rs.
- (c) 2400 Rs.
- (d) 3000 Rs.
- (e) 1800 Rs.

Q81. Length and breadth of a rectangular park is 150 meters & 100 meters respectively. If a 5 meters wide path is constructed outside the park, then find the area (in m<sup>2</sup>) of the path.

- (a) 12400
- (b) 1040
- (c) 5200
- (d) 10400
- (e) 2600

Q82. A vessel contains mixture of milk and water. The quantity of milk is 12 liters more than water in the vessel and the ratio of milk to water in the vessel is 3 : 2. If half of mixture is taken out from the vessel, then find the quantity of milk remaining in the final mixture.

- (a) 18
- (b) 24
- (c) 12
- (d) 15
- (e) 6

Q83. A and B together read 176 pages in 22 hours and B can read is 3/5<sup>th</sup> of number of pages A in one hour. If A, B and C together can read 300 pages in 20 hours, then find B and C together can read 240 pages in how many hours?

- (a) 20 hours
- (b) 24 hours
- (c) 16 hours
- (d) 30 hours
- (e) 32 hours

Q84. A 300 meters long train crosses its two times long bridge in 22.5 seconds and the same train crosses another train which is moving in opposite direction in 18 seconds. If the speed of second train is 14 m/s more than first train, then find the length of second train?

- (a) 600 meters
- (b) 1000 meters
- (c) 1392 meters
- (d) 1500 meters





Q85. Pipe A can fill 2/3<sup>rd</sup> of a tank in 40 minutes and pipe A & B together can fill half of the same tank in 12 minutes. Find pipe B can fill what part of the tank in 30 minutes?

- (a) 1/3
- (b)2/3
- (c) 1/2
- (d) 1/4
- (e) 3/4

Q86. The average speed of a car is 16.66% more than the average speed of a bus. A truck covers 480 km in 10 hours. If the speed of the bus is 50% more than the speed of truck, then the car will cover how much distance in 5 hours?

- (a) 240 km
- (b) 400 km
- (c) 480 km
- (d) 420 km
- (e) 320 km

Q87. A sold a watch to B by allowing two successive discounts 18% and 20%. Had A sold the watch to B by allowing only 30% discount, then the difference between selling price will be 110. If A marked the article 5/3<sup>rd</sup> above its cost price, then find cost price of watch for A?

- (a) Rs.1500
- (b) Rs.1200
- (c) Rs.1600
- (d) Rs.1250
- (e) Rs.1800

Q88. There was 189 liters pure milk in a container. 3/7<sup>th</sup> of milk was replaced with water in the container. Again 2/9<sup>th</sup> of the mixture is extracted and equal amount of water is added. What is the ratio of water and milk in the final mixture?

- (a) 4:5
  (b) 5:4
  (c) 7:6
  (d) 6:7
- (e) None of these

Q89. The ratio of the length to breadth of a rectangle is 5:4 and the perimeter of the rectangle is 108 cm. find the area of the rectangle.

- (a) 720 cm<sup>2</sup>
  (b) 640 cm<sup>2</sup>
  (c) 167cm<sup>2</sup>
- (d)  $290 \ cm^2$
- (e)  $567 \ cm^2$





Q90. 3 years ago, the average age of A, B and C is 36 years and the sum of ages of A and B after 2 years is 76 years. If C is 6 years younger than A, find the age of B.

(a) 8 years

(b) 10 years

- (c) 17 years
- (d) 21 years
- (e) 22 years

Q91. A man invested Rs. Q in scheme Z at the rate of 10% p.a. on compound annually for two years. Man invested total amount received from scheme Z in another scheme K at the rate of 12% p.a. on simple interest for 2 years. Find interest received from scheme K is what percent of interest received from scheme Z?

- (a) 144%
- (b) 122%
- (c) 189%

(d) 162%

(e) 138%

Q92. 14 men and 10 women can complete 80% of work in 20 days. If six men joined and 3 women left the work, then they could finish 60% of the same work in 15 days, then find the time taken by 25 women to complete the four times of the same work?

- (a) 40 days
- (b) 55 days
- (c) 25 days
- (d) 68 days
- (e) 120 days

Q93. A shopkeeper marked up of article A at 40% above its cost price and sold it at the discount of 20%. Profit made by shopkeeper on article A is Rs.216. If the cost price of article B is 60% more than that of article A and profit on both articles is same, then find the selling price of article **B**?

- (a) Rs.4200 (b) Rs.1270 (c) Rs.2890
- (d) Rs.1100
- (e) Rs.3096

Q94. Length of train A is 280 meters and length of train B is 'l' meters and train A and train B crosses a pole in 16 sec and 25 sec respectively, then find the time taken by train A to cross train B, when both trains are running in opposite direction if ratio of speed of train A to train B is 5 :

19	www.bankersadda.com	Test Prime
(e) 8 sec		
(d) 20 sec		
(c) 42 sec		
(b) 28 sec		
(a) 11 sec		
4?		





Q95. The ratio of speed of boat in still water to speed of stream is 11 : 7 and total time taken by boat to cover 'D' km distance in downstream and upstream together is 16.5 hours. Find the time taken by boat to cover '5.5D' km in still water?

- (a) 27 hours
- (b) 25 hours
- (c) 11 hours
- (d) 15 hours
- (e) 19 hours

Q96. A man spent 30% of his monthly income on house rent, 25% of the remaining income on Food. If from the remaining income, ratio of amount spent on travelling to saving of a man is 8: 7 and difference between amount spent on Food and travelling is Rs.1890, then find income of man for 14 months?

(a) Rs. 181000

- (b) Rs.252000
- (c) Rs.128000
- (d) Rs.67000
- (e) Rs.208000

**Q97.** A car travels a distance of 144 km in 4 hours and ratio of speed of car to bus is 9: 8. Find the time taken by bike to cover 120 km if its speed is 25% more than the speed of bus (in hours)? (a) 12

- (b) 8
- (c) 3
- (d) 10
- (u) 10 (a) Nam
- (e) None of the above

Q98. A and B started a business with Rs.10000 and Rs. 8000 respectively. After 6 months C joined them with the capital of Rs. 18000, if total profit at the end of the year is Rs.29700, what is the difference of profit received by B and C?

(a) *Rs*. 1100
(b) *Rs*.2400
(c) *Rs*.1200
(d) *Rs*.2800
(e) None of the above

Q99. In a mixture of milk and water, milk is 25 litres more than water. If 5 litre of milk and 10 litre of water is added to the mixture than the quantity of mixture became 60 litres. Find the quantity of water in the initial mixture (in lit).

(a) 10			
(b) 25			
(c) 45			
(d) 15			
(e) 20			
20	www.bankersadda.com		Test Prime





# Q100. The average weight of boys and girls are 40 kg and 35 kg respectively. If the average weight of the class is 38 kg, then find the number of boys is how much percent more or less than girls in the class?

(a) 20%

(b) 50%

(c)  $66\frac{2}{3}\%$ 

(d) 10%

(e) 25%

## Solution

#### S1. Ans.(e)

**Sol.** Let efficiency of P be x unit/day The, efficiency of Q = x × 3= 3x unit/day Total work = (x+3x) × 20 = 80x unit Time taken by P and Q to complete 40% of the work =  $80x \times 2/5 \times 1/(x+3x) = 8$  days Remaining work =  $80x - 80x \times 2/5 = 48x$  unit Efficiency of R = 48x/(26-8) = 8x/3 unit/day Time taken by R to complete the whole work alone =  $\frac{80x \times 3}{8x} = 30$  days

#### S2. Ans.(b)

**Sol.** Let the cost price of a notebook be Rs. 100x Then, cost price of a pen =  $100x \times 2/5 = 40x$  Rs Selling price of pen =  $40x \times \frac{140}{100} = 56x$  Rs Selling price of notebook =  $100x \times \frac{85}{100} = 85x$ ATQ, 85x - 56x = 29x = 43.5x = 1.5So, cost price of the pen =  $40 \times 1.5 =$  Rs. 60

#### S3. Ans.(c)

Sol. Let speed of boat in still water= x Speed of stream = y ATQ, (x-y)16=12x x=4y 12x=t(x + y) t=48y/5y=9.6 Required value = 9.6+0.4 = 10





#### S4. Ans.(b)

**Sol.** Let the rate of interest for the 3<sup>rd</sup> year be x% per annum. Total simple interest =  $\frac{20000 \times 10 \times 1}{100} + \frac{20000 \times 20 \times 1}{100} + \frac{20000 \times x \times 1}{100} = \text{Rs.} (6000 + 200\text{x})$ Compound Interest for 2 years, when rate is different for different years Compound interest =  $P\left(1 + \frac{R_1}{100}\right)\left(1 + \frac{R_2}{100}\right) - P$  $= 20000 \left(1 + \frac{10}{100}\right) \left(1 + \frac{20}{100}\right) - 20000$ = Rs 6400 Compound interest for 3rd year  $=26400\left(1+\frac{x}{100}\right)-26400$ =264x ATQ, 264x + 6400 - (6000 + 200x) = 104064x = 640x = 10%**S5.** Ans.(b) Sol. Ratio of profit: -Q R  $(9000 \times 6 + 4000 \times 6) : (6000 \times 6 + 9000 \times 6) : (3 \times 22000)$ 90000 78000 : 1 66000  $\Rightarrow$ 13 15 11  $\Rightarrow$ Difference of Q's & R's shares.  $= \text{Rs.} \left( 35100 \times \frac{15}{39} - 35100 \times \frac{11}{39} \right)$ = Rs. 3600

#### S6. Ans.(d)

**Sol.** Total weight of 16 coconuts =  $16 \times 1.5 = 24$  kg Total weight after addition of five watermelons = $21 \times 2 = 42$  kg So, weight of 5 watermelons = 42 - 24 = 18 kg

#### S7. Ans.(c)

**Sol.** Let the distance between point A and point B be D km. ATQ

 $11.5 = \frac{D}{32} + \frac{D}{60}$  $\frac{23}{2} = D\left[\frac{15+8}{480}\right] = D\left[\frac{23}{480}\right]$  $D = \frac{480}{2} = 240 \ km$ 





#### S8. Ans.(d)

Sol. Let speed of train be 'V m/sec' And let length of platform be 'l meters'. ATQ,  $\frac{l+220}{40} = V \dots$  (i) And,  $\frac{220}{11} = V + 3$ V = 17 ... (ii) Put value of (ii) in (i),  $\frac{l+220}{40} = 17$ l = 680 - 220 l = 460 m

#### S9. Ans.(d)

Sol. Let quantity of milk in initial mixture be x liters

ATQ,  $\frac{x+2}{7+11} = \frac{4}{1}$  x + 2 = 72 x = 70So, required quantity = 7 + 70 = 77 liters

#### S10. Ans.(c)

**Sol.** Rita's father's age =  $31 \times 2 - 28 = 34$  years Rita's age after two years =  $\frac{100}{300} \times (36) = 12$  years Rita's present age = 10 years Raju's present age =  $(10 - 2) \times \frac{75}{100} + 2 = 8$  years

#### S11. Ans.(d)

**Sol.** ATQ,  $X \times \frac{15}{100} \times 3 = 2340$ X = 5200

Cumulative compound interest =  $\left(20 + 20 + \frac{20 \times 20}{100}\right)\% = 44\%$ Required amount =  $\frac{144}{100} \times (5200 + 800) = Rs \, 8640$ 

#### S12. Ans.(e)

**Sol.** Let the radius and the height of the cylinder be 7a and 5a, respectively ATQ,  $2 \times \frac{22}{7} \times 7a \times 5a = 3520$  $a \times a = 16$ a = 4Required perimeter =  $4 \times 5 \times 4 = 80$  cm

I







ATQ,  $\frac{360}{10a} + 4.5 = \frac{360}{8a}$   $4.5 = \frac{360}{8a} - \frac{360}{10a}$   $4.5 = \frac{360(5-4)}{40a}$  a = 2The speed of the stream = a =2 km/hr.





#### S18. Ans.(d)

**Sol.** Speed of the train =  $\frac{240}{9.6}$  = 25 m/sec Length of the bridge = 25 × 16 - 240 = 160 meters Required time =  $\frac{240+160-60}{25}$  = 13.6 seconds

#### S19. Ans.(d)

**Sol.** Let the capacity of the tank (LCM of 18 & 24) = 72 units Efficiency of pipe A =  $\frac{72}{18}$  = 4 units/min Efficiency of pipe B =  $\frac{72}{24}$  = 3 units/min Efficiency of pipe C = 3 ×  $\frac{2}{3}$  = 2 units/min (outlet pipe) Required time =  $\frac{72}{4-2}$  = 36 minutes

#### S20. Ans.(a)

**Sol.** Given, A : A's mother = 3 : 4 Also, A's mother : A's brother = 9 : 4 So, A : A's mother : A's brother = 27 : 36 : 16 ATQ, 27x - 16x=11 x=1 Age of A's mother = 36 years

#### S21. Ans.(e)

**Sol.** The multiples of 7 between 1 and 60 are 7, 14, 21, 28, 35, 42, 49, and 56. There are 8 multiples of 7. Required probability =  $\frac{8}{60} = \frac{2}{15}$ 

#### S22. Ans.(b)

Sol. Let the monthly salary be 100x Amount spend on travelling =  $100x \times \frac{40}{100} = 40x$ Amount spend on rent =  $(100x - 40) \times \frac{25}{100} = 15x$ The amount spent on FD =  $(100x - 40x - 15x) \times \frac{3}{5} = 27x$ ATQ, 40x - 27x = 2600 x = 200The amount spent on food = (100x-40x-15x-27x) = 18x $= 18 \times 200 = \text{Rs } 3600$ 





#### S23. Ans.(b)

**Sol.** Let the time taken by A be 'd' day And time taken by B be 'd+16' days ATQ,  $\frac{1}{1} + \frac{1}{2}$ 1  $=\frac{1}{2}$ d+16 6 d  $\frac{d+16+d}{2} = \frac{1}{2}$  $d^2 + 16d$ 6  $12d + 96 = d^2 + 16d$  $d^2 + 4d - 96 = 0$  $d^2 + 12d - 8d - 96 = 0$ d(d+12) - 8(d+12) = 0(d+12)(d-8) = 0d = -12.8d = 8Required days = 8 days

#### S24. Ans.(a)

**Sol.** Let the monthly salary be 100x Amount spend on house rent =  $100x \times 1/5 = 20x$ Amount spend on house food =  $(100x-20x) \times 1/4=20x$ Amount he saved =  $(100x-20x-20x) \times 4/9 = 80x/3$ ATO, 80x/3-20x=6000 20x/3=6000 x=900 Required salary = 900×100=Rs 90000

#### S25. Ans.(e)

Sol. Amount received by Love be 4x Rs Amount received by Jack =  $4x \times 5/4 = 5x$  Rs Amount received by Kolvin =  $5x \times 3/5 = 3x$  Rs Amount received by Mosu = 4x-1000 Rs ATQ, 5x-(4x-1000) = 2000 x=1000 Rs So, Y = 4x + 5x + 3x + 4x - 1000Y=16x-1000 Y = 16 ×1000-1000 =15000 Rs

#### S26. Ans.(b)

**Sol.** Let the speed of the stream = u km/hr So, speed of boat in still water =  $u \times 5 = 5u \text{ km/hr}$ Given, 240/30=5u-u 8=4u u = 2 So,  $Y + 8 = 24 \times (5u + u)$  $Y + 8 = 24 \times 6u$ Y+8 =24×6×2=288 Y = 280



T

#### 26





#### S27. Ans.(c)

Sol. Let the present ages of P and Q be 'x' years and 'y' years respectively. ATQ, x+5=y-7 y - x=12...(i) And  $\frac{x+4}{y+4} = \frac{2}{3}$  3x+12=2y+8 2y-3x=4...(ii)From (i) & (ii) we get x = 20 Putting value of x = 20 in equation (i) we get y = 32 Required age = 20+32=52 years

#### S28. Ans.(c)

**Sol.** Let total mixture = 9x litres Quantity of water =  $9x \times 1/9 = x$  litres So, total quantity of milk = 9x - x = 8x litres ATQ,  $(8x - 54 \times \frac{8x}{9x}) = 32$ 8x = 32 + 488x = 80x = 10The initial quantity of water = 10 liters

#### S29. Ans.(b)

Sol. ATQ,  $\frac{3600 \times 9}{(P-3600) \times 12} = \frac{3600}{(6800-3600)}$   $\frac{3600 \times 9}{(P-3600) \times 12} = \frac{9}{8}$ 2400 = P - 3600 P = 6000 So, investment of Shyam = 6000 - 3600 = 2400 Rs

#### S30. Ans.(e)

**Sol.** Total weight of 96 students =  $96 \times 45 = 4320$  kg Total weight of (96+24) = 120 students =  $120 \times (45-3) = 5040$  kg Total weight of 24 students who joined = 5040 - 4320 = 720 kg Required average = 720/24 = 30 kg





S31. Ans.(e)

Sol. ATQ,  $X + X \times 11/100 \times 5 = 4960$  X + 55X/100 = 4960 155X = 496000 X = 3200 RsSo,  $Y = \frac{640 \times 100}{3200 \times 2}$ Y = 10

#### S32. Ans.(a)

Sol. Let height to base of a right angle triangle be 5x cm & 3x cm respectively  $1/2 \times 5x \times 3x = 120$   $15x^2 = 240$   $x^2 = 16$  x = 4Length of the rectangle =  $(5 \times 4 + X) = 20 + X \text{ cm}$   $(20 + X) \times 15 = 360$  20 + X = 24 X = 4Required perimeter =  $2 \times (24+15) = 78 \text{ cm}$ 

#### S33. Ans.(d)

**Sol.** Let cost price of the article = 100x Rs So, marked price of the article =  $100x \times \frac{140}{100} = 140x$  Rs Selling price of the article =  $140x \times \frac{4}{5} = 112x$  Rs ATQ, 112x - 100x = 180x = 15

Required selling price =  $\frac{1500 \times 112}{100}$  = 1680 Rs

#### S34. Ans.(a)

**Sol.** Let number of not promoted males or females employee = x

```
ATQ,

\frac{600-x}{240-x} = \frac{14}{5}
3000 - 5x = 3360 - 14x

9x = 360

x = 40

Required answer = 600 - 40 + 240 - 40 = 760
```

I





S35. Ans.(b) Sol. Formula used: Simple Interest = <u>Principle ×Rate of interest ×time</u> 100 Compound Interest =  $Principle \left[ (1 + \frac{rate \ of \ interest}{100})^{time} - 1 \right]$ **Explanation:** Total simple interest =  $\frac{1800 \times 2 \times 20}{100}$  = Rs. 720 Total compound interest =  $(1800 - p) \left[ (1 + \frac{30}{100})^2 - 1 \right]$  $=(1800-P)\times\frac{69}{100}$  $(1800 - P) \times \frac{\frac{69}{100}}{\frac{100}{69}} - 720 = 315$  $(1800 - P) = \frac{100}{69} \times 1035$ 1800 - P = 1500P = 300\$36. Ans.(a) Sol. Formula used: Profit share = Investment × *time* **Explanation**: Let their initial investments be 7x, 5x and 3x respectively Ratio of their profit =  $7x \times 6 + 3x \times 6 : 5x \times 12 : 3x \times 12$ =60x:60x:36x=15:15:9 = 5:5:3A's profit =3600×5/3 = Rs. 6000 S37. Ans.(c) Sol. Formula used: Profit = Cost price  $\times \frac{profit\%}{100}$ **Explanation:** Let cost price of article A = x Rs So, cost price of article B be x+120 Rs Then,  $\frac{25}{100} \times x + \frac{40}{100}(x + 120) = 178$  $\frac{65x}{100} + 48 = 178$ x=200 Cost price of article B = x+120= Rs. 320 S38. Ans.(d) Sol. Let, age of A be 'x' years, Then age of B = 'x+10' years And age of C = 3x years

ATQ.  $\frac{x+10+11}{3x} = \frac{3}{2}$ (x+21)2=9x 7x=42 x=6 Age of C after 7 years = 3x+7=18+7=25 years





S39. Ans.(d) Sol. Formula Used: Time = Distance/speed Explanation: Let Amit's speed = x km/hr & Suresh's speed = y km/hr ATQ,  $\frac{30}{x} - \frac{30}{y} = 2$  ------ (i)  $\frac{30}{2x} - \frac{30}{y} = -1$  ------ (ii) From (i) and (ii) we get x = 5 So, Amit's speed = 5 km/hr

#### S40. Ans.(c)

Sol. Formula used:

Efficiency (per hour) = Total work/total time **Explanation:** Tap A's capacity =  $\frac{500 \times 60}{6}$  = 5000 ml = 5 liters per hour Tap B's capacity =  $\frac{1 \times 60}{5}$  = 12 liters per hour Required time =  $\frac{5}{5} + (\frac{56-5}{12+5}) = 1 + 3 = 4$  hours

#### S41. Ans.(d)

#### Sol. Formula used:

Efficiency (per hour) = Total work/total time

#### **Explanation:**

A takes a total of  $12 \times 8 = 96$  hours to complete the work B takes a total of  $10 \times 8 = 80$  hours to complete the work Let, in x days they complete the work together working 8 hours a day. Then,

 $\frac{\frac{1}{96} + \frac{1}{80} = \frac{1}{8x}}{\frac{1}{12} + \frac{1}{10} = \frac{1}{x}}{\frac{11}{60} = \frac{1}{x}}$  $x = \frac{\frac{60}{11}}{\frac{11}{10} = \frac{60}{11}} \text{ days}$ 

#### S42. Ans.(d)

Sol. Formulas Used: Upstream speed =  $U = \frac{\text{Distance}}{\text{Time}}$ Downstream speed =  $D = \frac{\frac{\text{Distance}}{\text{Time}}}{\text{Time}}$ Speed of boat in still water =  $B = \frac{U+D}{2}$ Speed of stream =  $S = \frac{D-U}{2}$ 





#### **Explanation**:

Let speed of boat A and boat B in still water be 5x km/hr and 3x km/hr respectively And speed of stream be y km/hr.

So,  $2 = \frac{48}{(5x+y)+(3x-y)}$ Or  $2 = \frac{48}{(3x+y)+(5x-y)}$   $2 = \frac{48}{8x}$  x = 3Upstream speed of boat A = 24/2 = 12 km/hr  $12=5\times3 - y$ y = 3 km/hrDownstream speed of boat A = 15 + 3 = 18 km/hr

#### S43. Ans.(d)

**Sol. Explanation:** After removing 20 liter of mixture from the container ratio of milk to water remains same

i.e. 5 : 3 Now,  $\frac{5x-\frac{5}{8}\times20+10}{3x-\frac{3}{8}\times20} = \frac{3}{1}$ 5x - 12.5 + 10 = (3x - 7.5)35x - 2.5 = 9x - 22.5 4x=20 x=5 Initial quantity of milk =  $5 \times 5 = 25$  liter S44. Ans.(a) Sol. Formulas Used: Speed = Distance/Time **Explanation:** Speed of car =  $\frac{2125}{17}$  = 125 km/hr Speed of train =  $\frac{125 \times 4}{5}$  = 100 km/hr Speed of bus = 100 - 20 = 80 km/hr S45. Ans.(b) Sol. Formulas Used: Area of rectangle = length × width or breadth Length of diagonal =  $\sqrt{(\text{length})^2 + (\text{width or breadth})^2}$ Explanation: 6x×5x=4320  $30x^2 = 4320$ x=12 Length of diagonal =  $\sqrt{(6 \times 12)^2 + (5 \times 12)^2} = 12\sqrt{61}$ 31 www.bankersadda.com **Test Prime** T



**S46.** Ans.(c) **Sol.**  $a+b+c=3 \times 34 = 102$  d = 20 + eATQ,  $102 - (20+e+e) = 4^3 = 64$  102 - 20 - 2e = 64 18 = 2e 9 = eRequired sum = 102 + 29 + 9 = 140

#### S47. Ans.(a)

Sol. ATQ, 20/3 = 200/3 -selling price Selling price = 180/3 =Rs 60 per kg Cost price =  $60 \times \frac{100}{125} =$ Rs 48 per kg ATQ, Let the quantity mixed = m kg  $\frac{2x \times m + 3x \times m}{2m} = 48$  2x + 3x = 96x = 19.2

#### S48. Ans.(c)

Sol. The profit sharing ratio of P and Q =  $12000 \times 6 + 3x \times 6 : 15000 \times 6 + x \times 6$ = 12000+3x : 15000+xATQ,  $\frac{12000+3x}{15000+x} = \frac{58-31}{31} = \frac{27}{31}$ 31(12000 + 3x) = 27(15000 + x)372000 + 93x = 405000 + 27x66x = 405000 - 37200066x = 33000500 = x

#### S49. Ans.(b)

**Sol.** Let the sum invested in each scheme be Rs. x ATQ,

$$41\% \text{ of } x = \left(x\left(1 + \frac{r}{100}\right)^2 - x\right) + x \times \frac{2 \times r}{100}$$
$$0.41x = x\left(\left(1 + \frac{r}{100}\right)^2 - 1\right) + \frac{2xr}{100}$$
$$0.41 = \left(1 + \frac{r}{100}\right)^2 - 1 + \frac{2r}{100}$$
$$0.41 + 1 = \left(1 + \frac{r}{100}\right)^2 + \frac{2r}{100}$$
$$1.41 = \left(1 + \frac{r}{100}\right)^2 + \frac{2r}{100}$$









 $1.41 = \left(\frac{100+r}{100}\right)^2 + \frac{2r}{100}$   $1.41 \times 10000 = 10000 + r^2 + 200r + 200r$   $r^2 + 400r - 4100 = 0$   $r^2 + 410r - 10r - 4100 = 0$  r(r + 410) - 10(r + 410) = 0 (r + 410)(r - 10) = 0 r = -410, 10 r = 10Or  $1.41 = \left(\frac{100+r}{100}\right)^2 + \frac{2r}{100}$ Now put the option and get the answer.

#### S50. Ans.(a)

Sol. Time taken by B = 15 - 7 = 8 days Time taken by C = 8 + 4 = 12 days. Total work = 120 units (LCM of 8, 15 and 10) Efficiency of A = 120/15 = 8 unit/day Efficiency of B = 120/8 = 15 unit/day Efficiency of C = 120/12 = 10 unit/day Required answer = 5 +  $\frac{120-5(8+15)}{10\times\frac{1}{2}}$  = 5 + 1 = 6 days

# **S51.** Ans.(e) **Sol.** Let speed of stream be x km/hr. So, speed of boat in still water = $x \times \frac{300}{100} = 3x$ km/hr. ATQ, $\frac{192}{3x-x} = 6$ x = 16And $\frac{D}{3x+x} = \frac{225}{60}$ $\frac{D}{4\times 16} = \frac{225}{60}$

D = 240 km

#### S52. Ans.(c)

**Sol.** Let the side of the square be a m. Length of rectangle = a+5 m Breadth of rectangle = a-5 m Perimeter of square = 4a m Perimeter of the rectangle = 2(a+5+a-5) = 4a m Required answer = 4a - 4a = 0





**S53. Ans.(b) Sol.** Let CP be Rs. 100x ATQ, 85x + 1500 = 105x x = 75 Marked price = 120% of 100x = 9000 Rs Discount = 9000 - 85x = Rs. 2625 Rs

#### S54. Ans.(a)

Sol. Let the length of the train and the bridge be 2x and 5x respectively. Let the speed of the train be s m/s ATQ,  $\frac{2x+5x}{14} = s$ And  $\frac{2x+2x+140}{12} = s$ Equating both the equations We get, 6x - 4x = 140 2x = 140 70 = xLength of the bridge = 5x = 350 m

#### S55. Ans.(d)

Sol. Let present age of B be '2x' years. Then present age of A= 3x years ATQ,  $\frac{3x-5}{2x+10} = \frac{1}{2}$  6x - 10 = 2x + 10 4x = 20 x = 5Required age = (3x + 2x) + 10 = 35 years

#### S56. Ans.(d)

**Sol.** ATQ, Total weight =  $(40 \times 10)$  kg = 400 kg When weight of heaviest and lightest boy not taken into the group then total weight =  $(41 \times 8) = 328$  kg So, weight of heaviest boy + weight of lightest boy = (400 - 328) = 72 kg  $\Rightarrow 50$  + weight of lightest boy = 72 weight of lightest boy = 22 kg

I





#### S57. Ans.(a) Sol. Information Given: Man's monthly income =X (assumed) House rent =X/520% of the remaining income after house rent is spent on food. The remaining income after food is divided between clothing and saving in a 7:9 ratios. Difference between amount spent on food and clothing = Rs. 540. Formula Used: Remaining income after expenses = Total income - Expenses Percentage calculation: Part = Total × Percentage Ratio-based allocation: Part 1 = $\frac{\text{Ratio 1}}{\text{Sum of Ratios}} \times \text{Total}$ **Explanation:** Monthly income is X Rs House rent is X/5 Rs so remaining income = X - X/5 = 4X/5 Rs Amount spent on food $=0.2 \times 4X/5 = 4X/25$ Rs Remaining income after food = $4X/5 - 4X/25 = \frac{16X}{25}$ Rs Clothing and savings are split in a 7:9 ratio Therefore, amount spent on clothing = $7/16 \times 16X/25 = 7X/25$ Rs Given, 7X/25 - 4x/25 = 540solve for X. 3X/25=540 X=4500 Rs **S58.** Ans.(c) Sol. Information Given: Speed of the stream = S km/hr Speed of the boat in still water =1.6S km/hr Total time taken for X km downstream and upstream = 16 hours Formula Used: Downstream speed = Speed of boat + Speed of stream Upstream speed = Speed of boat - Speed of stream Time = Distance / Speed **Explanation:** Downstream speed =S +1.6S = 2.6S km/hr Upstream speed =1.6S - S = 0.6S km/hr Total time equation: X/2.6S + X/0.6S = 16 Simplify to find X/S $3.2X = 16 \times 1.56S$ X = 7.8S Required time = $(2 \times 7.8S)/1.6S = 9.75$ hours





#### S59. Ans.(e) Sol. Information Given:

Length of train A=400 meters Train A crosses a pole in 16 seconds Train B crosses a pole in 52 seconds Speed of train A is 25% more than train B

#### Formula Used:

Speed = Distance / Time Time to cross each other = Total Distance / Relative Speed **Explanation:** Speed of train of A=400/16 =25 m/s Speed of train of B=25×4/5= 20 m/s So, x = 20 ×52= 1040 meters Time taken = (400+1040)/(25+20)=32 seconds

#### S60. Ans.(d)

#### Sol. Information Given:

Marked price of article A=8/5 of cost price Discount on article A=1/4 th of marked price Profit on article A = Rs. 950 Cost price of article B=7/5 of cost price of article A

#### Formula Used:

Selling Price = Marked Price - Discount Profit = Selling Price - Cost Price

#### Explanation:

Let cost price of article A = 100x Rs So, marked price of article A=  $100x \times 8/5 = 160x$  Rs Selling price of article, A=  $3/4 \times 160x = 120x$  Rs ATQ, 120x - 100x = 95020x = 950x = 95/2Cost price of article A =  $100 \times 95/2 \times = 4750$  Rs Selling price of article B =  $4750 \times 7/5 \times + 950 = 7600$  Rs

#### S61. Ans.(e)

#### Sol. Information Given:

8 men and 7 women can complete work in 15 days. Additional 2 men =10 men, work 4/5th in 10 days. Find the time for 21 women to complete double the work. **Formula Used:** 

Work = Number of workers × Time Efficiency relation: M (man) and W (woman)



**Explanation:** 



# Let M be man's 1-day work and W be woman's 1-day work. (8M+7W)×15= total work $(10M+7W) \times 10=4/5$ the of work Use to find M and W $\frac{(8M+7W)\times 15}{(10M+7W)\times 10} = \frac{(10M+7W)\times 10}{(10M+7W)\times 10}$ M/W=7/2 Total work = (8×7+7×2)×15=1050 units Required days = $2100/21 \times 2 = 50$ days S62. Ans.(a) Sol. Information Given: Initial ratio of A's and B's investment =4:5. After 6 months, A doubles his investment and B reduces by 33.33%. Total profit = Rs. 6100. Formula Used: Profit sharing ratio = (Investment × Time) of A:(Investment × Time) of B **Explanation:** A's investment for the first 6 months $=4x \times 6$ B's investment for the first 6 months $=5x \times 6$ A's doubled investment $=8x \times 6$ B's reduced investment = $10x/3 \times 6$ Ratio of profit share of A to B = $(4x \times 6 + 8x \times 6) : (5x \times 6 + 10x/3 \times 6)$ = 72x : 50x = 36x : 25xRequired difference = $6100 \times 11x/61x = 1100$ Rs

# S63. Ans.(b)

#### Sol. Information Given:

Initial investment X at 20% p.a. compound interest for 2 years. Interest from scheme B at 5% simple interest for 4 years = Rs. 1584.

#### Formula Used:

Compound Interest =  $P\left(1 + \frac{R}{100}\right)^T$ Simple Interest =  $P \times \frac{R \times T}{100}$ 

#### Explanation:

Amount after 2 years in scheme A =  $X \times \left(1 + \frac{20}{100}\right)^2 = 1.44X$ Invest in scheme B: Simple interest  $SI = 1.44X \times \frac{5 \times 4}{100}$ Given SI=1584, Solve for X  $1.44X \times (5 \times 4)/100 = 1584$ 1.44X = 7920X = 5500 Rs





#### S64. Ans.(d) Sol. Information Given: Average age of A and B after 4 years = 30 years. Six years ago, B to A age ratio =3:1 Present age of C= Age difference between A and B. Formula Used: Average Age = Sum of Ages / Number of People Ratio and difference equations. **Explanation:** $A+B+4 \times 2 = 60$ , so A+B=52 -----(i) Six years ago, (A-6)/B-6 = 1/33A - 18 = B - 6B = 3A - 12 -----(ii) From (i) and (ii) A + 3A - 12 = 524A = 64A = 16 And B = 52 - 16 = 36So, required ratio 36 : (36 - 16) = 9 : 5 S65. Ans.(e) Sol. Information Given: Initial water =40% of milk 84 liters of mixture removed, 64 liters of water added Milk becomes 16.66% more than water Formula Used: Mixture proportions after extraction and addition Ratio conversions. **Explanation:** Initially, let milk =M So, water = $M \times 2/5 = 0.4M$ ATQ, $\frac{M - 84 \times \frac{5}{7}}{0.4M - 84 \times \frac{2}{7} + 64} = \frac{7}{6}$ We know 16.66% = 1/6 $\frac{M-60}{M+40} = \frac{7}{6}$ 0.4M + 406M - 360 = 2.8M + 280

So, initial quantity of water =  $0.4 \times 200 = 80$  liters

3.2M = 640 M = 200





S66. Ans.(a) Sol. Information Given: Radius of circle X is 25% less than circle Y Sum of circumference of X and diameter of Y=188 cm Height to radius ratio of triangle =5: 4 Area of triangle =350 Formula Used: Circumference of a circle  $=2\pi r$ Area of a triangle  $=1/2 \times base \times height$ Ratio and circumference relationships **Explanation:** Let radius of circle X & Y be 3r and 4r respectively  $2 \times \frac{22}{7} \times 3r + 2 \times 4r = 188$  cm r = 7 cmHeight of triangle =  $5/4 \times (4 \times 7) = 35$  cm ATQ,  $350 = 1/2 \times base \times 35$ Base = 20 cmS67. Ans.(a) **Sol.** Total work complete by  $A = \frac{20}{25} \times 100 = 80$  days Total work complete by B =  $\frac{30}{1} \times 2 = 60$  days Total work (LCM of 80 & 60) = 240 units Efficiency of A = 240/80 = 3 units/day Efficiency of B = 240/60 = 4 units/day A and B work complete in 2 days = 7 units A and B work complete in 68 days = 238 units Remaining work = 240 - 238 = 2 units 2 units done by B in half day Required days = 68.5

#### S68. Ans.(e)

**Sol.** Let the cost price be Rs 100a Marked price =  $100a \times \frac{220}{100}$  = Rs 220a Selling price =  $220a \times \frac{60}{100}$  = Rs 132a Given, 132a-100a=96 32a=96 a=3 Required profit =  $132 \times 3 - (100 \times 3 \times \frac{125}{100})$ = 396 - 375 = Rs 21





S69. Ans.(c) Sol. ATQ.  $(P + 50) \times \frac{12}{100} \times 4 = 888$ P + 50 = 1850P = 1800Compound interest rate = 1800/180 = 10% p.a. Cumulative compound interest =  $\left(10 + 10 + \frac{10 \times 10}{100}\right)\% = 21\%$ Required amount =  $\frac{121}{100} \times 5000 = Rs \ 6050$ 

#### S70. Ans.(c)

**Sol.** Given, a + b + c + d = 320And a + c + d = 260b = 320 - 260 = 60 $d = \frac{60}{3} \times 5 = 100$ So, a + c = 260 - 100 = 160 ... (i)And a - c = 20 ...(ii)From (i) & (ii) a = 90 and c = 70Required average = (90+100)/2 = 95

#### S71. Ans.(e)

**Sol.** Speed of the train = 750/15 = 50 m/sec t = (750+250)/50 = 20 Speed of the man = 20-10=10 m/sec Required time = 750/(50+10) = 12.5 seconds

#### S72. Ans.(a)

**Sol.** Let the upstream speed of the boat be 5x km/hrAnd the speed of the boat in still water is 6x km/hrSo, downstream speed of the boat is 7x km/hrGiven, 280/7x = 10x = 4Required distance =  $4 \times 6 \times 3 = 72 \text{ km}$ 

#### S73. Ans.(d)

Sol. Side of the square = 72/4 = 18 cm Area of the square =  $18 \times 18 = 324$  sq. cm Area of the semicircle = 324 - 16 = 308 sq. cm Radius of the semicircle = r cm  $308 = \frac{1}{2} \times \frac{22}{7} \times r^2$   $r^2 = 196$ r = 14 Required ratio = 14 : 18 = 7 : 9



T

40





#### S74. Ans.(c)

**Sol.** Quantity of milk =  $280 \times \frac{3}{7} = 120$  liters Quantity of water =  $280 \times \frac{4}{7} = 160$  liters Quantity of mixture taken out = 280/4 = 70 liters Let quantity of milk added be X liters ATQ,  $\frac{120-70 \times \frac{3}{7} + X}{160-70 \times \frac{4}{7}} = \frac{1}{1}$ 90 + X = 120

X = 30

#### S75. Ans.(c)

**Sol.** The profit sharing ratio of A to B =  $6 \times 22 : 11 \times 24$ = 1:2 Required percentage =  $\frac{2}{1} \times 100 = 200\%$ 

#### S76. Ans.(e)

**Sol.** In one hour, the difference between distance covered by train and car = 90 - 60 = 30 km So, t = 60/30 = 2Required distance =  $60 \times (2+1) = 180$  km

#### S77. Ans.(a)

#### Sol. Information given:

Boat takes, 20 hours to cover (X + 80) km in upstream

10 hours to cover X km in downstream

Speed of stream = 4 km/hr

#### Formula Used:

Time = Distance/speed

Downstream speed =speed of boat + speed of stream Upstream speed =speed of boat - speed of stream

#### **Explanation**:

Let speed of boat in still water be y km/hr  $\frac{X+80}{(y-4)} = 20$ X + 80 = 20y - 80 y =  $\frac{X+160}{20}$  ----- (i) Also,  $\frac{X}{(y+4)} = 10$ y = (X - 40)/10 ----- (ii) From (i) and (ii) we get  $\frac{X+160}{20} = \frac{X-40}{10}$ X + 160 = 2X - 80 X = 240 From (ii) y = (240-40)/10 = 20 km/hr







#### S78. Ans.(b)

#### Sol. Information given:

Rs. P in scheme A on simple interest at the rate 20% p.a. for 3 years Rs. (P+6000) in scheme B on simple interest at the rate 20% p.a. for two years Interest received by man from scheme B is Rs. 800 more than that of from scheme A

#### Formula Used:

Simple interest = (principle ×time × rate)/100

#### **Explanation:**

ATQ - $(P+6000) \times \frac{20 \times 2}{100} - P \times \frac{20 \times 3}{100} = 800$  0.40P + 2400 - 0.60P = 800 0.20x = 1600 x = 8000 Rs.

#### S79. Ans.(a)

#### Sol. Information given:

The ratio of present age of A to B is 3 : 5

The present age of B is  $3/4^{\text{th}}$  of C

Four years hence, the sum of age of B and C will be 78 years

#### Formula Used:

Simple ratio based

#### **Explanation:**

Let present age of C = 4x years So, present age of B =  $4x \times 3/4=3x$  years So, present age A =  $3x \times 3/5=9x/5$  years ATQ, (4x+3x) + 8 = 787x = 70x = 10

Required difference =  $4 \times 10 - \frac{9 \times 10}{5} = 22$  years

#### S80. Ans.(d)

#### Sol. Information Given:

A, B and C entered into a business and invested in the ratio of 5 : 4 : 6

After four months, B and C left the business. At the end of a years, the total profit is Rs. 5000 **Formula:** 

Profit sharing ratio = Investment × time

#### **Explanation**:

Profit share ratio of A, B and C respectively = 5 ×12 : 4×4 : 6 × 4 = 15 : 4 : 6

So, profit share of A =  $5000 \times \frac{15}{(15+4+6)} = 3000$  Rs.





# S81. Ans.(e) Sol. Information Given: Length and breadth of a rectangular park is 150 meters & 100 meters 5 meters wide path is constructed outside the park Formula Used: Area of rectangular park = Length × breadth Area of path = Area of (rectangular park + path) - area of rectangular park Explanation: Area of park = 150 × 100=15000 m<sup>2</sup> Length of park including path = 150 + 2 × 5=160 m Breadth of park including path = 100 + 2×5=110 m Area of park including path = 60×110=17600 m<sup>2</sup> Required difference = 17600 - 15000 = 2600 m<sup>2</sup>

#### Information Given:

The quantity of milk is 12 liters more than water

Ratio of milk to water in the vessel = 3 : 2

Half of mixture is taken out from the vessel

#### Formula Used:

**Q**uantity of liquid 1/Quantity of liquid 2 = ratio of liquid 1/ratio of liquid 2

#### Explanation:

Let quantity of water in the vessel initially = x liters

So, quantity of milk in the vessel initially = x + 12 liters

 $\begin{array}{l} \text{ATQ} - \\ \frac{x+12}{x} = \frac{3}{2} \\ \text{Prime} \\ \text{ATQ} \\ \text{ATQ$ 

2x + 24 = 3x

#### x = 24

So, quantity of milk in the vessel initially = 24 + 12 = 36 liters

Required milk remaining in the final mixture =  $36 - (24+36) \times \frac{1}{2} \times \frac{3}{5}$ 

= 36 – 18 = 18 liters

#### S83. Ans.(b)

#### Sol. Information Given:

A and B together read 176 pages in 22 hours B can read is 3/5<sup>th</sup> of number of pages A A, B and C together can read 300 pages in 20 hours **Formula Used:** Efficiency = work/time





#### **Explanation:**

Total pages read by A and B in one hour  $=\frac{176}{22} = 8$ Let efficiency of A = 5x pages/hour So, efficiency of B =  $5x \times \frac{3}{5} = 3x$  pages/hour 5x + 3x = 8x = 1Efficiency of C  $=\frac{300}{20} - (5+3) = 7$  pages/hours So, required time  $=\frac{240}{(7+3)} = 24$  hours

#### S84. Ans.(c)

#### Sol. Information Given:

Length of train = 300 meters Time taken by train to cross its two times long bridge = 22.5 seconds The train crosses another train which is moving in opposite direction in 9 seconds Speed of second train is 14 m/s more than first train

#### Formula used:

Speed in (meter/seconds) = speed (in km/hr) ×18/5 Speed = distance/time Distance (length) = speed ×time **Explanation:** Length of bridge =  $300 \times 2 = 600$  meters Speed of train =  $\frac{(300+600)\times 2}{45} = 40m/s$ Speed of train second train = 40 + 14 = 54 m/sLet required length be L meter.

ATQ,

(300+L) =18×(40 + 54) L = 1392 meters

# S85. Ans.(e)

#### Sol. Information Given:

Pipe A can fill 2/3<sup>rd</sup> of a tank in 40 minutes Pipe A & B together can fill half of the same tank in 12 minutes **Formula Used:** Capacity of tank = LCM of time taken by (individual pipe or pipes together) Efficiency of pipe = total capacity of tank/time taken **Explanation:** Pipe A can fill the whole tank =  $40 \times \frac{3}{2} = 60$  minutes A and B together fill the whole tank = 24 minutes Let the capacity of tank be 120 units (LCM of 60 & 24) then, pipe A's efficiency =  $\frac{120}{60} = 2$  units/min together pipe (A+ B)'s efficiency =  $\frac{120}{24} = 5$  units/min so, pipe B's efficiency = 5-2 = 3 units/min

Pipe B can fill 90 units i.e.  $\frac{3}{4}th$  part of tank in 30 minutes.





#### S86. Ans.(d) Sol. Information Given:

Sol. Information Given: The average speed of a car is 16.66% more than the average speed of a bus Truck covers 480 km in 10 hours speed of the bus is 50% more than the speed of truck Formula Used: Speed = distance/time Distance = speed ×time Explanation: Ratio of speed of car and speed of bus = 7 : 6 (we know, 16.66% = 1/6) Speed of truck =480/10=48 km/hr Speed of bus =  $48 \times 3/2 = 72$  km/hr Speed of car =  $72 \times 7/6 = 84$  km/hr Distance cover by car in 5 hours =  $84 \times 5 = 420$  km

# \$87. Ans.(a)

#### Sol. Information Given:

A sold a watch to B by allowing two successive discounts 18% and 20%

Had A sold the watch to B by allowing only 30% discount, then he would have earned Rs.110 more than earlier

A marked the article 5/3<sup>rd</sup> above its cost price **Formula Used**:

Selling price = Marked price  $\times \frac{(100 - discount \%)}{100}$ 

#### **Explanation:**

Let A marked the watch at Rs.100x. ATQ,  $(100x \times \frac{70}{100}) - (100x \times \frac{82}{100} \times \frac{80}{100}) = 110$ 70x - 65.6x = 110

*x* = 25

Hence, required cost price =  $2500 \times \frac{300}{500}$  = Rs.1500

#### S88. Ans.(b)

**Sol.** Quantity of water in a mixture =  $189 \times \frac{3}{7} = 81$  *liters* Quantity of milk in a mixture = 189 - 81 = 108 *liters* Ratio of milk to water in the mixture = 108:81 = 4:3Again 2/9<sup>th</sup> of the mixture is taken out and equal amount of water is added So,

Quantity of a mixture is taken out =  $(108 + 81) \times \frac{2}{9} = 42$  liters Quantity of milk in a final mixture =  $108 - 42 \times \frac{4}{7} = 108 - 24 = 84$  liters Quantity of water in a final mixture =  $81 - 42 \times \frac{3}{7} + 42 = 105$  liters Req. ratio = 105:84 = 5:4





#### S89. Ans.(a)

**Sol.** Let the length and the breadth of a rectangle be 5x & 4xPerimeter of the rectangle = 108 cm 2(5x + 4x) = 1089x = 54x = 6 cmSo, length of a rectangle =  $5x = 5 \times 6 = 30 cm$ And breadth of a rectangle =  $4x = 4 \times 6 = 24 cm$ Area of the rectangle =  $30 \times 24 = 720 cm^2$ 

#### S90. Ans.(d)

**Sol.** Sum of the present ages of A, B and C =  $36 \times 3 + 3 \times 3 = 117$  years .....(i) Sum of the present ages of A and B = 76 - 4 = 72 years ...... (ii) From (i) & (ii) Present age of C = 45 years Present age of A = 45 + 6 = 51 years So, present age of B = 72 - 51 = 21 years

#### S91. Ans.(e)

**Sol.** Equivalent interest received by man from scheme Z at the rate of 10% p.a. for two years =  $10 + 10 + \frac{10 \times 10}{100} = 21\%$ 

So, total interest received by man from scheme  $Z = Q \times \frac{21}{100} = 0.21Q$ Total amount received by man from scheme Z = Q + 0.21Q = 1.21QTotal interest received by man from scheme  $K = 1.21Q \times \frac{12 \times 2}{100} = 0.2904Q$ Required percentage  $= \frac{0.2904Q}{0.21Q} \times 100 = 138.28\% \approx 138\%$ 

#### S92. Ans.(d)

**Sol.** Let the efficiency of a man and a woman be 'x' units/day and 'y' units/day respectively. ATQ,

 $\frac{(14x+10y)\times 20}{\frac{80}{100}} = \frac{(20x+7y)\times 15}{\frac{60}{100}}$  3y = 6x  $\frac{x}{y} = \frac{1}{2}$ Total work =  $(14 \times 1 + 10 \times 2) \times 20 \times \frac{100}{80} = 34 \times 20 \times \frac{100}{80} = 850 \text{ units}$ Required days =  $\frac{4\times 850}{25\times 2} = 68 \text{ days}$ 





#### S93. Ans.(e)

**Sol.** Let the cost price of article A = 100a Marked price of article A =  $100a \times \frac{140}{100} = 140a$ Selling price of article, A =  $140a \times \frac{(100-20)}{100} = 112a$ ATQ -112a - 100a = 216a = 18 Since, *Selling price* = *cost price* + *profit* So, selling price of article B =  $100 \times \frac{160}{100} \times 18 + 216 = Rs.$  3096

#### S94. Ans.(d)

Sol. Speed of train A =  $\frac{280}{16}$  = 17.5 m/sec So, speed of train B = 17.5 ×  $\frac{4}{5}$  = 14 m/sec ATQ,  $\frac{l}{14}$  = 25 l = 350 meters Now the time in which train A crosses train B running in opposite direction =  $\frac{280+350}{(17.5+14)}$  = 20 sec

#### S95. Ans.(a)

**Sol.** Let the speed of stream be '7x' km/h and speed of boat in still water is '11x' km/h

ATQ,  $\frac{D}{11x+7x} + \frac{D}{11x-7x} = 16.5$   $\frac{11D}{36x} = 16.5$  D = 54xSo, Required time =  $\frac{5.5 \times 54x}{11x} = 27$  hours

#### S96. Ans.(b)

**Sol.** Let the monthly income of man be Rs.100x. Amount spent on house rent =  $100x \times \frac{30}{100} = 30x$ Amount spent on Food =  $\frac{25}{100} \times (100x - 30x) = 17.5x$ Remaining amount = 100x - 30x - 17.5x = 52.5xAmount spent on travelling =  $52.5x \times \frac{8}{15} = 28x$ ATQ, 28x - 17.5x = 1890 x = 180So, income of man for 14 months =  $180 \times 100 \times 14 = Rs.252000$ 





**S97. Ans.(c) Sol.** speed of bike  $=\frac{125}{100} \times \frac{8}{9} \times \frac{144}{4} = 40$  km/hr Required time  $=\frac{120}{40} = 3$  hr

#### S98. Ans.(a)

**Sol.** Ratio of profit share of A, B and C = (10000 × 12): (8000 × 12): (18000 × 6) = 10:8:9 Requireed difference =  $\frac{29700}{27}$  × 1 = Rs. 1100

#### S99. Ans.(a)

**Sol.** Let the quantity of milk and water be m and w respectively. m - w = 25 ..(I) m + w = 60 - (5 + 10) = 45 ..(II)Solving equations, we get m = 35, w = 10Quantity of water in the initial mixture =10 litres

#### S100. Ans.(b)

Sol. Let number of boys and girls in the class be x and y respectively. ATQ. 40x+35y=38(x + y) 40x-38x=38y-35y 2x=3y x/y=3/2Required  $\% = \frac{3-2}{2} \times 100 = 50\%$ 

