

Statement Test-7

1. The perimeter of rectangle is 62 cm less than perimeter of a square whose side is 48 cm. Find the difference between the areas of rectangle and square, if breadth of rectangle is 5 cm less than its length.

(A) 1229 cm² (B) 1236 cm² (C) 1254 cm² (D) 1241 cm² (E) None of these

2. If daily wages worker earns Rs. 640 per day in a month of 30 days. If he earns Rs. 450 per day for first 16 days and Rs. 250 for next 9 days, then find his average income earnings per day for last 5 days of the month.

(A) Rs. 1940 (B) Rs. 1900 (C) Rs. 1950 (D) Rs. 1400 (E) None of these

3. Average marks scored by Vinay in X subjects of first term was (X + 16). In 16 subjects of second and third term he scored marks with an average of 54. After that his overall average marks increased by 2. Find the value of X.

(A) 34 (B) 32 (C) 38 (D) 376 (E) None of these

4. The average of A, B and C is 64 and the average of B, C and D is 44. If A is 100% more than D then find five times the average of B and C.

(A) 180 (B) 140 (C) 160 (D) CND (E) None of these

5. A certain amount was distributed among three friends (A, B & C) in the ratio 1 : 4 : 3. If the amount was divided in the ratio 1 : 1/4 : 1/3 then B got Rs. 1248 less. Find the total amount.

(A) Rs. 3684 (B) Rs. 3524 (C) Rs. 3648 (D) Rs. 3654 (E) None

6. Ratio of income to expenditure of Akash is 6 : 5 while that of Kiran is 9 : 4. If savings of both Akash and Kiran is same, then what is the respective ratio of income of Akash and Kiran?

(A) 3 : 10 (B) 10 : 3 (C) 5 : 4 (D) 4 : 5 (E) None of these

7. Average runs scored by a batsman in 10 innings is 30 and it remains same after next inning also. How many runs did he score in 11th innings?

(A) 40 (B) 45 (C) 70 (D) 30 (E) None of these

8. A shopkeeper purchased 30 kg of rice at Rs. 3024 and sells at a profit of as much as the selling price of 6 kg. Find the selling price of rice per kg.

(A) Rs. 160 (B) Rs. 135 (C) Rs. 126 (D) Rs. 100 (E) None of these

9. A circular ring is cut and bent in form of a rectangle. The radius of the ring is 14 cm and the sides of the rectangle formed are in the ratio 9 : 2. Find the area of rectangle.

(A) 238 cm² (B) 264 cm² (C) 244 cm² (D) 288 cm² (E) None of these

10. In what ratio should rice costing Rs. 600 per kg mixed with rice costing Rs. 450 per kg so that the shopkeeper get a profit of 25% while selling it at Rs. 625?

(A) 3 : 2 (B) 1 : 2 (C) 2 : 5 (D) 5 : 7 (E) None of these

11. A train running at 49 km/hr, crosses a car running 435 meter ahead of train in same direction in 54 seconds. Find the speed of car.

(A) 15 km/h (B) 20 km/h (C) 25 km/h (D) 30 km/h (E) None of these

12. Average of 27 numbers is 29. The average of first 13 numbers is 26 while that of last 13 numbers is 34. If the 14th number is removed then find the average of remaining numbers.

(A) 40 (B) 45 (C) 70 (D) 30 (E) None of these

13. What will be the ratio of quantity of milk to water in the final solution formed by mixing milk and water that are present in three beakers P, Q and R of equal capacity in the ratios 3 : 2, 7 : 5, 4 : 3 respectively?

(A) 2155 : 303 (B) 3038 : 2155 (C) 737 : 523 (D) 523 : 737 (E) None of these

14. The ratio of the present ages of P, Q and R is 6 : 4 : 9. The age of P 5 years ago was the same as the age of R 17 years ago. Find the average age of all three P, Q and R 2 years hence.

(A) 27.9 (B) 29.3 (C) 29.7 (D) 27.3 (E) None of these

15. 28 men can complete a piece of work in 44 days. After 20 days 'X' more men joined the work and the whole work was completed in 8 days less than its stipulated time. Find the value of 'X',.

(A) 16 (B) 17 (C) 15 (D) 14 (E) None of these

16. The ratio of juice to water in a vessel is 7 : 5 respectively. If 24 liters of mixture is taken out and 28 liters of juice is added to mixture, then the ratio of juice to water becomes 7 : 4. Find the initial quantity of mixture.

(A) 289 L (B) 216 L (C) 256 L (D) 225 L (E) None of these

17. When an article is sold at 23% discount the shopkeeper has 21% profit, if the selling price of article is Rs. 4235 find the difference between cost price and marked price of the article.

(A) Rs. 1500 (B) Rs. 2500 (C) Rs. 2000 (D) Rs. 1600 (E) None

18. Average of 31 numbers is 31 and the average of first 12 numbers is 36 while that of last 18 numbers is 27. What is the 13th number from the starting?

(A) 43 (B) 45 (C) 41 (D) 47 (E) None of these

19. A Bike runs at 45 km/hr from point A to B in 4 hrs, and crosses a tree after 80 minutes of start of its journey, find the distance between tree and point B.

(A) 100 (B) 108 (C) 115 (D) 120 (E) None of these

20. The ratio of the ages of A, B and C is 8 : 12 : 15. The age of A 6 years ago is 1/4th of age of C after 10 year. Find the age of B 4 years ago.

(A) 20 years (B) 23 years (C) 29 years (D) 27 years (E) None of these

21. The monthly salary of Rohan is Rs. 24000. He took a loan of Rs. 'z' on simple interest for 4 years at the rate of 6% per annum. The total amount that he will be repaying as interest in 4 years is 5% of his monthly salary. Find the value of 'z'

(A) Rs. 2000 (B) Rs. 5000 (C) Rs. 3000 (D) Rs. 4500 (E) None of these

22. The ratio of cost price of a bag and a book is 4 : 5. A shopkeeper sold the bag at 20% profit and book at 20% less. If the difference between their selling price is Rs. 120, then find the cost price of book.

(A) Rs. 750 (B) Rs. 520 (C) Rs. 490 (D) Rs. 630 (E) None of these

23. A and B are two partners and they have invested Rs. 54,000 and Rs. 90,000 in business. After one year A received Rs 1200 as his share of profit out of total profit of Rs. 4200 including his certain commission on total profit since he is a working partner and rest profit is received by B. What is the commission of A as a percentage of the total profit?

(A) 1200 (B) 1350 (C) 1400 (D) 1150 (E) None

24. A shopkeeper marks up the price of his product by 20%. If he increases the discount from 5% to 10%, the profit would decrease by Rs 21. How much profit/loss would he earn if he gives a discount of 20% on the marked price?

(A) Rs14 loss (B) Rs14 profit (C) Rs20 loss (D) Rs20 profit (E) None

25. The distance between two cities A and B is 330km. A train starts from A at 7am. and travels towards B at 60 km/hr. Another train starts from B at 8am. and travels towards A at 75 km/hr. At what time do they meet?

(A) 11am (B) 11.30am (C) 10.30am (D) 10am (E) None

26. Speed of a man in still water is 6 km/hr and the river is running at 4km/hr. The total time taken to go to a place and come back is 18 hours. What is the distance traveled?

(A) 45km (B) 40km (C) 60km (D) 50km (E) None

27. The average weight of a group of 20 boys was calculated to be 89.4 kg and it was later discovered that one weight was misread as 78 kg instead of the correct one of 87 kg. The correct average weight is:

(A) 88.95kg (B) 89.25kg (C) 89.55kg (D) 89.85kg (E) None

1. Ans. (C)

Perimeter of Square = 4×48
 = 192 cm Length of Rectangle
 = x cm Breadth of Rectangle
 = $(x - 5)$ cm $2 \times (x + x - 5) = 192 - 62$
 $2 \times (2x - 5) = 130$ $2x - 5$
 = 65 $2x = 70$ $x = 35$ Area of Square
 = $48^2 = 2304$ cm² Area of Rectangle
 = $35 \times 30 = 1050$ cm² Difference
 = $2304 - 1050 = 1254$ cm²

2. Ans. (C)

Average earning in 5 days
 = $(640 \times 30 - 450 \times 16 - 250 \times 9)/5$
 = $9750/5 = 1950$ Rs.

3. Ans. (B)

$X \times (X + 16) + 16 \times 54$
 = $(X + 16) \times (X + 16 + 2) \times 2 + 16X + 864$
 = $X^2 + 34X + 288$ $18X$
 = 576 $X = 32$

4. Ans. (A)

Let $D = x$, $A = 2x$
 $A - D = 2x - x = 3 \times 64 - 3 \times 44$
 $x = 3 \times 20 = 60$
 $D = 60$

Average of B & C
 = $(3 \times 44 - 60)/2 = 36$
 5 time of Average of B & C
 = $36 \times 5 = 180$

5. Ans. (C)

1st Ratio = $1 : 4 : 3$,
 2nd Ratio = $1 : 1/4 : 1/3 = 12 : 3 : 4$
 Let total Amount = x Rs.
 $x \times 4/8 - x \times 3/19 = 1248$
 $x \times (19 - 6)/38 = 1248$
 $x = 1248 \times 38/13 = 3648$ Rs.

6. Ans. (B)

For Akash, Income = $6x$,
 Expenditure = $5x$
 For Kiran, Income = $9y$,
 Expenditure = $4y$
 $6x - 5x = 9y - 4y$
 $x = 5y$
 Income of Akash : Income of Kiran
 = $6x : 9y = (6 \times 5y) : 9y = 10 : 3$

7. Ans. (D)

Run scored in 11th inning
 = $11 \times 30 - 10 \times 30 = 30$

8. Ans. (C)

SP per kg = x Rs.
 $30x = 3024 + 6x$
 $24x = 3024$
 $x = 126$ Rs.

9. Ans. (D)

$2 \times 22/7 \times 14 = 2 \times (9x + 2x)$

$2 \times 2 = x = 4$
 Area of Rectangle
 = $(9 \times 4) \times (2 \times 4) = 288$ cm²

10. Ans. (B)

Let x kg of 1st type mixed with y kg of 2nd type then
 $(600 \times x + 450 \times y) \times 1.25 = 625 \times (x + y)$
 $600x + 450y = 500x + 500y$
 $100x = 50y$
 $x : y = 1 : 2$

11. Ans. (B)

Speed of Car = $49 - 435/54 \times 18/5$
 = $49 - 29 = 20$ km/h

12. Ans. (D)

Average of remaining number
 = $13 \times (26 + 34)/26 = 60/2 = 30$

13. Ans. (C)

In Final mixture, Milk : Water
 = $(3/5 + 7/12 + 4/7) : (2/5 + 5/12 + 3/7)$
 = $737 : 523$

14. Ans. (D)

At present, $P = 6x$ year, $Q = 4x$ year, $R = 9x$ year
 $6x - 5 = 9x - 17$
 $3x = 12$
 $x = 4$

Average of Ages after 2 year
 = $(6 + 4 + 9) \times 4/3 + 2$
 = $19 \times 4/3 + 2 = 25.33 + 2$
 = 27.33 year

15. Ans. (D)

$28 \times 44 = 28 \times 20 + (28 + X) \times (44 - 20 - 8)$ 28×24
 = $(28 + X) \times 16$ $28 + X = 7 \times 6$
 = 42 $X = 14$

16. Ans. (B)

Initially, Juice = $7x$ L, Water
 = $5x$ L $(7x - 24 \times 7/12 + 28) / (5x - 24 \times 5/12)$
 = $7/4 (x - 2 + 4) \times 4 = 5x - 10$ $4x + 8$
 = $5x - 10$ $x = 18$ Initial

quantity of mixture = $7x + 5x$
 = $12 \times 18 = 216$ L

17. Ans. (C)

MP - CP = $4235/0.77 - 4235/1.21$
 = $5500 - 3500 = 2000$ Rs.

18. Ans. (A)

13th number is
 = $31 \times 31 - 12 \times 36 - 18 \times 27$
 = $961 - 432 - 486 = 43$

19. Ans. (D)

Distance between point B & Tree
 = $4 \times 45 - (80/60) \times 45$
 = $180 - 60 = 120$ km

20. Ans. (A)

Present age of,
 $A = 8x$, $B = 12x$, $C = 15x$
 $8x - 6 = (15x + 10) \times 1/4$

$32x - 24 = 15x + 10$
 $17x = 34$
 $x = 2$

B's age 4 year ago
 = $12 \times 2 - 4 = 24 - 4 = 20$ years

21. Ans. 2 5000**22. Ans. (A)**

CP of Bag = Rs. $4x$ CP of Book
 = Rs. $5x$ $4x \times 1.2 - 5x \times 0.8$
 = 120 $4.8x - 4x = 120$ $0.8x$
 = 120 $x = 150$ CP of Book
 = $5 \times 150 =$ Rs. 750

23. Option A**Solution:**

Ratio of profit of A : B (excluding commission of A) = $54000 : 90000 \Rightarrow 3 : 5$
 Now the share of profit of B = $4200 - 1200 =$ Rs. 3000
 So the share of profit A (excluding commission) = Rs. 1800
 So the commission of A = $3000 - 1800 = 1200$

24. Option A**Solution:**

Let CP be 100 then MP 120
 5% discount = 114.
 10% discount = 108.
 Diff 6 21
 (CP)100 \Rightarrow 350.
 Then MP = 20% of 350 = $70 = 350 + 70 = 420$.
 Now 20% discount 20% of 420 = 336.
 Loss = $350 - 336 =$ Rs 14.

25. Option D**Solution:**

Distance travelled by first train in one hour
 = $60 \times 1 = 60$ km
 Therefore, distance between two train at 9 a.m.
 = $330 - 60 = 270$ km
 Now, Relative speed of two trains = $60 + 75 = 135$ km/hr
 Time of meeting of two trains = $270/135 = 2$ hrs.
 Therefore, both the trains will meet at $9 + 2 = 10$ A.M.

26. Option C**Solution:**

Down speed = $6 + 4 = 10$
 Up speed = $6 - 4 = 2$
 Let distance travelled = X
 $(X/10) + (X/2) = 18$
 $X = 30$ km
 Total distance is $30 + 30 = 60$.

27. Option D**Solution:**

Total actual weight = $(89.4 \times 20 - 78 + 87)$ kg
 = 1797 kg.
 \therefore Correct average weight = $1797/20 = 89.85$ kg