Statement Test-5

1. The ratio of investment of P, Q and R is 4 : 7 : 9. After 5 months P withdraws 50% of the investment and after 8 months Q withdraws 14.28% of the investment. If at the end of the year the profit share of R is Rs. 6966, then find the total profit earned. (A) Rs. 14239 (B) Rs. 14319 (C) Rs. 14258 (D) Rs. 14149 (E) None of these

2. The price of a Sugar is increased by 16%. A person wants to increase his expenditure by 9% only. By what percent should he decrease his consumption?
(A) 6% (B) 8% (C) 7% (D) 9% (E) None of these

3. Two trains P and Q crosses a man in 9 sec and 13 sec respectively. If the ratio of the speed of train P and Q is 4 : 5 respectively, then the length of the train Q is what percent more than the length of train P?
(A) 81.5% (B) 80.5% (C) 78.5% (D) 79.5% (E) None of these

4. A shopkeeper gives one pencil free on purchase of 12 pencils and also he offers 9% discount. He marked at what percentage above the cost price of the pencil so that he gained 12% on whole transaction?
(A) 26.66% (B) 25% (C) 22.22% (D) 33.33% (E) None of these

5. In a colony there was a rectangular park of dimensions 150 cm × 75 cm in which a path of width 4 cm is made inside the park. What will be the price to make the path, If price is Rs. 15 per cm2?
(A) Rs. 26040 (B) Rs. 35420 (C) Rs. 23640 (D) Rs. 22450 (E) None of these

6. Ankit sold a TV at a loss of 19%. If he sold the TV for Rs. 6656 more than the previous price, then he gained 7% of profit. What is the cost price of the TV?
(A) Rs. 24000 (B) Rs. 24560 (C) Rs. 25600 (D) Rs. 25000 (E) None of these

7. The speed of boat in still water is 41(2/3)% more than the speed of stream. If the boat covers 435 km in downstream and 630 km in upstream in 282 hours, then find in how many hours will it cover 1071 km in still water?
(A) 155 hours (B) 126 hours (C) 142 hours (D) 148 hours (E) None of these

8. 54 liters of cream is present in 117 liters of solution P and rest is milk. X liters of solution Q which contains cream and milk in ratio 5 : 8 is mixed with 78 liters of P such that 28/65 part of final solution is cream. Find value of X.
(A) 78 liters (B) 52 liters (C) 39 liters (D) 65 liters (E) None of these

9. A cube of lengths 16 m, 18 m and 20 m is melted to form 21 spheres of radius 4 m such that remaining molten metal is used to form a cuboid which has sides in the ratio 1 : 2 : 1, then find the total curved surface area of cuboid.
(A) 160 m2 (B) 240 m2 (C) 200 m2 (D) 120 m2 (E) None of these

10. A's income is 20% more than income of B and expenditure of B is 12.5% less than expenditure of A. If savings of A is 25% more than savings of B, then find ratio of total savings of A and B to income of B.
(A) 3 : 2 (B) 2 : 5 (C) 4 : 3 (D) 6 : 5 (E) None of these

11. A and B start a business by investing amounts in the ratio 8 : 5 and after 8 months A and B increase their investments by 25% and 40%. If total profit at end of year is Rs. 3440, then find share of A in the profit.
(A) 2080 Rs. (B) 2160 Rs. (C) 2120 Rs. (D) 2200 Rs. (E) None of these

12. If difference between interests earned when Rs. X is invested for 3 years at compound interest at rate of 25% and same amount invested at simple interest at rate of 12.5% for 8 years is Rs. 270, then find the value of X.
(A) Rs. 5120 (B) Rs. 6240 (C) Rs. 5760 (D) Rs. 4860 (E) None of these

13. A boat covers 576 km in 18 hours upstream and 768 km downstream in 16 hours, then find the time taken by boat to cover 260 km in still water.
(A) 13 hours (B) 6.5 hours (C) 26 hours (D) 3.25 hours (E) None of these

14. The ratio of speeds of person X and Y is 8 : 5 and they run in same direction for 16 seconds and distance between them is 840 m. What is the approximate distance between them when they run in opposite direction for 22 seconds?
(A) 3.0 km (B) 4.5 km (C) 6.0 km (D) 5.0 km (E) None of these

15. Ratio between time taken by X and Y to complete a work is 3 : 5 and ratio of efficiency of X to Z is 5 : 6. If Z alone takes 25 days to complete the work, then find the time taken by X to complete remaining work, If Y and Z works for 15 days and 5 days? (A) 7.5 days (B) 10 days (C) 15 days (D) 20 days (E) None of these

16. A card is taken after removing cards which are even numbered and Red in colour. What is the probability of getting Black face card?
(A) 37.5 days (B) 62.5% (C) 50.0 days (D) 25.0 days (E) None of these

17. The average of present ages of 'A', 'B', 'C' is 28 years. The present age of A is 25% more than that of 'B'. If 14 years hence from now, the ratio of ages of 'A' and 'C' will be 7 : 5 respectively. Then find the difference between the present ages of 'A' and 'B'. (A) 9 years (B) 3 years (C) 7 years (D) 5 years (E) None of these

18. Rs. 15600 is invested in scheme 'P' at 30% p.a. simple interest for 3 years while Rs. 18000 is invested in scheme 'Q' at 16.66% p.a. compound interest, compounded annually for 2 years. Find the difference between the interest received from the given two schemes.
(A) 7820 (B) 7540 (C) 7130 (D) 7390 (E) None of these

19. Herry and Johan entered in business by investing Rs. 14400 and 15600, respectively for a year. They distributed 16.66% of the total profit between them equally and rest in the ratio of their investments. If the profit received by Johan is Rs. 240 more than that by Herry, then find the total profit received by them.
(A) 7200 (B) 6800 (C) 5300 (D) 8400 (E) None of these

20. The ratio of the perimeters of a rectangle and a square is 11 : 8, respectively. If the breadth of the rectangle is equal to the side of the square, them find the ratio of length of the rectangle to the side of the square.
(A) 8 : 2 (B) 3 : 5 (C) 5 : 2 (D) 7 : 4 (E) None of these

21. Rohan spends 35% of his income on travel. 42% of the rest on cloths, Rs. 6604 on entertainment after spending on travel and cloths and saves the rest. If his saving is Rs. 13000 which is 1/4th of his total income, then find his expenditure on cloths. (A) 14552 (B) 14398 (C) 14196 (D) 14254 (E) None of these

22. Boat 'X' with speed 54 km/h takes 8 hours to reach a point A from point B. Two boats 'Y' and 'Z' having speed of 24 km/h in still water start from point A and point B, respectively at 8 AM. At what time boat Y and boat Z will meet each other?
(A) 6 : 30 PM (B) 5 : 00 PM (C) 4 : 50 PM (D) 4 : 20 PM (E) None of these

23. The sum of upstream and downstream speed of a boat is 84 km/h. The speed of the stream is 8 km/h. Find the total time taken by boat to cover 153 km upstream and 180 km downstream.
(A) 6.7 hours (B) 8.1 hours (C) 4.3 hours (D) 2.5 hra (E) None of these

24. A and B individually can complete a task in 2x and 5x days respectively. 40% of the work is completed by C in 'x' days and remaining work is completed by 'A' and 'B' working together in 8(4/7) days. If they are entitled to receive Rs. 14000 for the completion of work, then find the share of A.
(A) 4330 (B) 5500 (C) 6000 (D) 5000 (E) None of these

25. 150 kg of mixture X contains 50% Wheat, 20% Corn and rest is Barley. Mixture Y contains only Corn and Barley in same ratio as X. Find the amount of Corn present in mixture Y such that quantity of Wheat becomes 30% when X and Y are mixed. (A) 40 kg (B) 60 kg (C) 32 kg (D) 50 kg (E) None of these

26. X and Y together can complete a work in 24 days. If X alone can complete same work in 150% more time than time taken by both of them, Then find the number of days taken by Y to complete same work alone.
(A) 30 days (B) 40 days (C) 45 days (D) 50 days (E) None of these

27. Two farms X and Y uses 120 liter and 80 liter of water respectively. If next day Y produce 20% more waste than previous day, then By what percentage X should decrease his water usage such that their total water use increase by only 5%?
(A) 2% (B) 3% (C) 4% (D) 5% (E) None of these

(Page No.124,)

1. Ans. (B)
Investment of P = 4x × (5 + 7 × 0.5) = 4x × (5 + 3.5) = 4x × 8.5 = 34x Rs. Investment of Q = 7x × 8 + 6x × 4 = 56x + 24x = 80x Rs. Investment of R = 9x × 12 = 108x Rs. Profit Ratio, P : Q : R = 34x : 80x : 108x = 17 : 40 : 54 Total profit = 6966 × 111/54 = 14319 Rs.
2. Ans. (A)
Price = 1 Rs./unit, Consumption = x unit Expenditure = 1 × x = x Rs. New Price = 1.16 Rs./unit New Expenditure = 1.09x Rs. New Consumption = 1.09x/1.16 = 109x/116 unit Reduction in Consumption = (x – 109x/116)/x × 100 = 6.03% = 6%
3. Ans. (B)
Length of Train P : Length of Train Q = (4 × 9) : (5 × 13) = 36 : 65 Length of Train Q is more than Length of Train P by = (65 – 36)/36 × 100 = 80.55%
4. Ans. (D)
CP of 1 pencil = x Rs. CP of 13 pencil = 13x Rs. SP of 12 pencil (1 free) = 13x × 1.12 = 14.56x Rs. MP of 12 pencil = 14.56x/0.91 = 16x Rs. MP of 1 pencil = 16x/12 = 4x/3 Rs. Mark up = (4x/3 – x)/x × 100 = 33.33%
5. Ans. (A)
Area of Park = 150 × 75 – (150 – 2 × 4)(75 – 2 × 4) = 150 × 75 – (150 × 75 – 225 × 8 + 64) = 1800 – 64 = 1736 cm2 Price of making path = 1736 × 15 = 26040 Rs.
6. Ans. (C)
CP of TV = 6656/(1.07 – 0.81) = 6656/0.26 = 25600 Rs.
7. Ans. (B)
Speed of Stream = 12x km/h Speed of Boat = 17x km/h 435/(17x + 12x) + 630/(17x – 12x) = 282 435/29x + 630/5x = 282 15/x + 126/x = 282 141/x = 282 x = 0.5 Time taken to cover 1071 km = 1071/(17 × 0.5) = 1071/8.5 = 126 hours
8. Ans. (B)
In Solution P, Cream : Milk = 54 : (117 – 54) = 54 : 63 = 6 : 7 78 × 6/13 + X × 5/13 = (78 + X) × 28/65 5 × (468 + 5X) = (78 + X) × 28 2340 + 25X = 2184 + 28X 3X = 156 X = 52 L
9. Ans. (A)
16 × 18 × 20 = 21 × 4/3 × 22/7 × 43 + x × 2x × x 5760 = 5632 + 2x3 2x3 = 128 x3 = 64 x = 4 Total Surface Area of Cuboid = 2 × (x × 2x + 2x × x + x × x) = 2 × (2 + 2 + 1) × x2 = 2 × 5 × 42 = 160 m2
10. Ans. (D)
Income of B = 5x, Income of A = 5x × 1.2 = 6x Saving of B = 4y, Saving of A = 5y (6x – 5y) × 7/8 = (5x – 4y) 42x – 35y = 40x – 32y 2x = 3y x = 1.5y Saving of A & B : Income of B = (5y + 4y) : 5x = 9y : (5 × 1.5y) = 6 : 5
11. Ans. (A)
Investment of A = 8 × (8 + 1.25 × 4) = 8 × (8 + 5) = 8 × 13 Investment of B = 5 × (8 + 1.4 × 4) = 5 × (8 + 5.6) = 5 × 13.6 Profit Ratio, A : B = (8 × 13) : (5 × 13.6) = 26 : 17 Profit of A = 3440 × 26/43 = 2080 Rs.
12. Ans. (C)
Interest on SI = X × 0.125 × 8 = X Rs. Interest on CI = X × (1.253 – 1) = X × (125/64 – 1) = X × 61/64 X – X × 61/64 = 270 X × 3/64 = 270 X = 5760 Rs.
13. Ans. (B)
Upstream speed = 576/18 = 32 km/h Downstream speed = 768/16 = 48 km/h Speed of Boat in still water = (48 + 32)/2 = 80/2 = 40 km/h 260 km will be cover in = 260/40 = 6.5 hours
14. Ans. (D)
Speed of X = 8x m/s, Speed of Y = 5x m/s 8x – 5x = 840/16 3x = 52.5 x = 17.5 Distance when they run in opposite direction = (8x + 5x) × 22
= 13 × 17.5 × 22 = 5005 m = 5 km
15. Ans. (C)
Efficiency Ratio, X : Y : Z = 5 : 3 : 6
Let X work for = x days
5 × x + 3 × 15 + 6 × 5 = 6 × 25
x + 9 + 6 + 30
x = 30 – 15 = 15 days
16. Ans. (A)
Number of Even number & Red card
= 5 × 2 + 13 × 2 = 10 + 26 = 36
Remaining Card = 52 – 36 = 16
Black face card = 3 × 2 = 6
Probability = 6/16 × 100 = 37.5%
17. Ans. (C)
Age of B = x years,
Age of A = 1.25x years
Age of C = 3 × 28 – x – 1.25x
= (84 – 2.25x) years
(1.25x + 14)/(84 – 2.25x + 14) = 7/5
5 × (1.25x + 14) = 7 × (98 – 2.25x)
6.25x + 70 = 686 – 15.75x
22x = 616
x = 28
Age of A – Age of B
= 1.25x – x = 0.25 × 28 = 7 years
18. Ans. (B)
Interest received from Scheme P
= 15600 × 0.3 × 3 = 14040 Rs.
Interest received from Scheme Q
= 18000 × ((7/6)2 – 1)
= 18000 × 13/36 = 6500 Rs.
Difference = 14040 – 6500 = 7540 Rs.
19. Ans. (A)
Profit Ratio, Herry : Johan
= 14400 : 15600 = 12 : 13
Total profit = x Rs.
x × 5/6 × (13 – 12)/25 = 240
x × 5/6 × 1/25 = 240
x = 240 × 30
x = 7200 Rs.
20. Ans. (D)
Width of Rectangle = Side of Square = x cm
Length of Rectangle = y cm
2(x + y)/4x = 11/8
4(x + y) = 11x
4x + 4y = 11x
4y = 7x
y : x = 7 : 4
21. Ans. (C)
Income = 13000 × 4 = 52000 Rs.
Expenditure on Clothes = 52000 × 0.65 × 0.42 = 14196 Rs.
22. Ans. (B)
Boat Y & Z meet each other after
= (54 × 8)/(24 + 24) = 54 × 8/48
= 54/6 = 9 hours
9 hour after 8 AM = 5 : 00 PM
23. Ans. (B)
Speed of Boat = 84/2 = 42 km/h,
Time taken
= 153/(42 – 8) + 180/(42 + 8)
= 153/34 + 180/50 = 4.5 + 3.6
= 8.1 hours
24. Ans. (C)
2x × a = 5x × b
a = 2.5b
c × x = 0.4 × 5x × b
c = 2b
0.6 × 5x × b = 60/7 × (a + b)
3x × b = 60/7 × (2.5b + b)
3x = 60/7 × 3.5
x = 20/7 × 3.5 = 10
Share of Wage, A : B : C
= (60/7 × a) : (60/7 × b) : (10 × c)
= (60/7 × 2.5b) : (60/7 × b) = (10 × 2b) = 150 : 60 : 140 = 15 : 6 : 14
Share of A = 14000 × 15/35 = 6000 Rs.
25. Ans. (A)
In Mixture X,
Corn : Barley = 20 : 30 = 2 : 3
Quantity of Final mixture
= (150 × 0.5)/0.3 = 250 kg
Quantity of Mixture Y
= 250 – 150 = 100 kg
Corn in Mixture Y = 100 × 2/5 = 40 kg
26. Ans. (B)
Efficiency of X = 2,
Efficiency of X & Y = 2 × 2.5 = 5
Efficiency of Y = 5 – 2 = 3
Time taken by Y to complete work
= 24 × 5/3 = 40 days
27. Ans. (D)
Water uses in Farm X next day
= 200 × 1.05 – 80 × 1.2
= 210 – 96 = 114
% decrease in Water used in Farm X
= (120 – 114)/120 × 100 = 5%