Statement Test 7

1. A two digit number is 18 more than the sum of its digit. If half of 18 is added to the number, the digits of the number will interchanged. Find the number.
(A) 27 (B) 21 (C) 25 (D) 23 (E) None of these
2. Vikas invests Rs. X at simple interest 15% per annum for 4 years and get Rs. 3000 as interest. If he invests Rs. 9000 more at the same interest rate and same period, then find the interest earned by Utkarsh.
(A) Rs. 8600 (B) Rs. 8400 (C) Rs. 8200 (D) Rs. 8800 (E) None of these
3. X is 4 years older than Y and X is also 6 years younger than Z. 4 years hence, the respectively ratio between the ages of Y and Z will be 12 : 17. What is the sum of the present ages of X, Y and Z?
(A) 86 years (B) 58 years (C) 62 years (D) 74 years (E) None of these
4. Find the length of the train, which crosses two bridges of length 480 m and 270 m length in 80 seconds and 60 seconds respectively.
(A) 320 m (B) 360 m (C) 310 m (D) 330 m (E) None of these
5. A rectangular field of dimension 40 m × 27 m is surrounded by 2 m wide track. What is the area (in square meters) of the track?
(A) 284 m2 (B) 263 m2 (C) 272 m2 (D) 259 m2 (E) None of these
6. Two persons Vikas and Kavi had the number of pen in the ratio 7 : 5 respectively. When Vikas gave 25 pen to Kavi, then respective ratio of the number of their pen become 4 : 5. How many pen Vikas initially had?
(A) 105 (B) 103 (C) 107 (D) 109 (E) None of these
7. Speed of car is 4 km/h less than that of bus. Time taken by bus to travel 80 km is 30 minutes less than time taken by the car to cover a distance of 90 km. Find the distance travelled by the car in 3 hours 45 minutes.
A.150 km B.135 km C.225 km D.210 km E.None of these
8. Present average age of 'A', 'B' and 'C' is 64 years. Twelve years hence from now, ratio of age of 'A' and 'B' will be 3:4, respectively. Age of 'C' fifteen years hence from now will be 75% of present age of 'B'. Find the ratio present age of 'A' and 'C', respectively. A.4:3 B.5:4 C.3:2 D.7:4 E.None of these
9. Cost price of article 'A' is Rs. 240 more than that of 'B'. The shopkeeper marked article 'A' 60% above its cost price and sold it after giving a discount of 25% while he sold article 'B' at a profit of 30%. Find the marked price of article 'A' if selling price of article 'A' is Rs. 228 more than that of 'B'.
A.Rs. 840 B.Rs. 1344 C.RS. 600 D.Rs. 1008 E. Can't be determined
10. Kashi started a business by investing Rs. 'X + 8000'. After 2 months, Rita joined with Rs. 40000. The ratio of the profit of Kashi to Rita is 36 : 25, then find the value of 'X + 8000'. (A) 42000 (B) 48000 (C) 46000 (D) 44000 (E) None of these
11. Varun covers 260 km with a speed of 48 km/hr and 260 km with speed of X km/hr. If the average speed of journey is 38.4 km/hr, then find the value of X.
(A) 28 (B) 18 (C) 32 (D) 32 (E) None of these
12. A 128 liter mixture P contains alcohol and soda in the ratio 3 : 5. It is mixed with 207 liters of mixture Q which contains alcohol and soda in the ratio 4 : 5. Find the ratio of the quantity of alcohol and soda in the final mixture.
(A) 28 : 39 (B) 14 : 29 (C) 17 : 28 (D) 22 : 39 (E) None of these
13. The speed of a boat in still water is 11 km/hr more than the speed of the stream. While travelling downstream, If the boat covers a distance of 348 km in 12 hours, then what is the speed (in km/hr) of the boat in still water?
(A) 10 km/hr (B) 30 km/hr (C) 20 km/hr (D) 40 km/hr (E) None of these
14. The present age of Anita and Sweta is 'Y' year and 9 years respectively. If after 5 years, the age of Sweta will be 40% percentage of the age of Anita, then find the value of (Y + 8) years.
(A) 34 years (B) 36 years (C) 38 years (D) 30 years (E) None
15. A and B enter into a partnership with their capital in the ratio of 16:9 resp. At the end of 6 months, B withdrew his capital. If they receive the profits in the ratio of 32:27 resp. For how many long is A 's capital used?
a. 5 b. 6 c. 3 d. 2 e. 4
16. A man can row 15 km/hr. in still water and he finds that it takes him twice as much time to row upstream as to row downstream . Find the speed of water.
a. 9 b. 5 c. 11 d. 10 e. 8
17. When 50% of first number is added to the second number then second number increases by 25% . Find the ratio of first number to the second number.
a. 3:5 b. 5:7 c. 1:2 d. 2:5 e. 1:4
18. A mixture of contains 360 litres of milk and water in the ratio of 5:4 resp. x litres of mixture is taken out and replaced with same quality of water such that of milk and water becomes 1:1 resp.Find the value of x.
a. 30 b. 44 c. 36 d. 28 e. 39
19. A,B and C started a business together with a total investment of Rs.3600. After a year , A and B received a profit of Rs.1500 and Rs.2000 out of the total profit of Rs.6000. Find the inital investment of C (in Rs.)
a. 1000 b. 1500 c. 1400 d. 1300 e. 1200
20. The ratio of the units digit to the tens digit of two digit number is 4:1 and the sum of digits is 10. Find the product of digits of number.
a. 10 b. 14 c. 16 d. 19 e. 13
21. A bag contains (x+2) red balls, (x+3) green balls and (x+4) yellow balls. If the probability of drawing a red ball from the bag is 3/10. Find the number of green balls in the bag. a. 13 b. 18 c. 10 d. 12 e. 14
22. Three pipes A, B and C are connected to a tank. A and B together can fill the tank in 10 hours, B and C together in 15 hours and C and A together in 12 hrs. In how much time all pipes fill the tank together? a. 7 b. 6 c. 8 d. 4 e. 9
23. Tea worth Rs. 126 per kg and Rs. 135 per kg are mixed with a third variety in the ratio 1 : 1 : 2. If the mixture is worth Rs. 153 per kg, then what is the price of third variety per kg. a. 178 b. 180.6 c. 155.6 d. 175.5 e. 181.8
24. The height of a circular cylinder is increased to six times and the base area is decreased to oneninth of its value. The factor by which the lateral surface of the cylinder increase ? a. 1 b. 2 c. 3 d. 4 e. 5
25. What will be the ratio of petrol and kerosene in the final solution formed by mixing petrol and kerosene that are present in three same capacity of vessels in the ratio 4 : 1, 5 : 2 and 6 : 1 respectively ?
a. 81 : 26 b. 87 : 25 c. 78 : 29 d. 83 : 22 e. 81 : 21
26. A bag contains 2 yellow, 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?
A. ½ B. 10/21 C. 9/11 D. 7/11 E. 3/7
27. A work which is completed by 20 men in 8 days can be completed by 25 women 12 days. 16 men and 10 women start doing the work. After 3 days, they leave. If the remaining work is to be completed in 6 days by x number of men, find x.
A) 16 B) 18 C) 12 D) 10 E) 22

1. Ans. (D)
Let the number is = 10x + y
10x + y = x + y + 18
9x = 18
x = 2
10x + y + 9 = 10y + x
9y - 9x = 9
y - 2 = 1
y = 3
Number is = 10 × 2 + 3 = 20 + 3 = 23
2. Ans. (B)
Interest earned = (X + 9000) × 0.15 × 4
= X × 0.15 × 4 + 9000 × 0.15 × 4
= 3000 + 5400 = Rs. 8400
3. Ans. (D)
Age of X = x years
Age of Y = (x - 4) years
Age of Z = (x + 6) years
(x - 4 + 4)/(x + 6 + 4) = 12/17
17x = 12(x + 10)
17x = 12x + 120
5x = 120
x = 24
Sum of Present Age of X, Y & Z
= x + (x - 4) + (x + 6) = 3 × 24 + 2
= 72 + 2 = 74 years
4. Ans. (B)
Length of Train = x m
(x + 480)/80 = (x + 270)/60
3(x + 480) = 4(x + 270)
3x + 1440 = 4x + 1080
x = 360 m
5. Ans. (A)
Area of Track
= (40 + 2 × 2) × (27 + 2 × 2) - 40 × 27
= 44 × 31 - 40 × 27 = 1364 - 1080
= 284 m2
6. Ans. (A)
Initially, Vikas had = 7x pens
Kavi had = 5x pens
(7x - 25)/(5x + 25) = 4/5
35x - 125 = 20x + 100
15x = 225
x = 15
Initially Vikas had = 7 × 15 = 105 pens
7.Solution
Let speed of bus is ‘x’ km/h
Speed of car = ‘x – 4’ km/h
So, 90/(x – 4) – 80/x = 1/2
Or, (90x – 80x + 320)/{x(x – 4)} = 1/2
Or, x^2 – 4x = 20x + 640
Or, x^2 – 24x – 640 = 0
Or, x^2 – 40x + 16x – 640 = 0
Or, x(x – 40) + 16(x – 40) = 0
Or, (x + 16)(x – 40) = 0
Or, x = 40
Speed of car = 40 – 4 = 36 km/h
Desired distance = 36 × 3.75 = 135 km
Hence, option b.
8.Solution
Let age of ‘A’ and ‘B’, 12 years hence from now will be ‘3x’ years and ‘4x’ years, respectively.
Let present age of ‘C’ is ‘y’ years
So, y + 15 = 0.75 × (4x – 12)
Or, y = 3x – 9 – 15
Or, y = 3x – 24
So, {3x + 4x – 12 – 12 + 3x – 24}/3 = 64
Or, 10x = 240
Or, x = 24
Present age of ‘A’ = 3 × 24 – 12 = 60 years
Present age of ‘C’ = 3 × 24 – 24 = 48 years
Desired ratio = 60:48 = 5:4
Hence, option b.
9.Solution
Let cost price of article ‘B’ is Rs. ‘x’
So, selling price of article ‘B’ = 1.30 × x = Rs. 1.3x
Cost price of article ‘A’ = x + 240
Selling price of article ‘A’ = 0.75 × 1.60 × (x + 240) = 1.2x + 288
1.2x + 288 – 1.3x = 228
Or, 0.1x = 60
Or, x = 600
Cost price of article ‘A’ = 600 + 240 = Rs. 840
Marked price of article ‘A’ = 1.60 × 840 = Rs. 1344
Hence, option b.
10. Ans. (B)
Investment of Kashi
= (X + 8000) × 12 Rs.
Investment of Rita = 40000 × 10 Rs.
{(X + 8000) × 12}/{40000 × 10} = 36/25
25 × (X + 8000) = 3 × 40000 × 10
X + 8000 = 48000
11. Ans. (D)
38.4 = (2 × 48 × X)/(48 + X)
48 + X = 2.5X
1.5X = 48
X = 32
12. Ans. (A)
In Final mixture, Alcohol : Soda

= (128 × 3/8 + 207 × 4/9) : (128 × 5/8 + 207 × 5/9) = (48 + 92) : (80 + 115)
= 140 : 195 = 28 : 39

13. Ans. (C)

Downstream Speed
= 348/12 = 29 km/hr
Speed of Stream
= (29 - 11)/2 = 18/2 = 9 km/hr
Speed of Boat in still water
= 9 + 11 = 20 km/hr

14. Ans. (C)

(Y + 5) × 0.4 = (9 + 5)
Y + 5 = 14/0.4 = 35
Y = 30
Y + 8 = 30 + 8 = 38 years

15. Option E

A withdew capital after x months .
(16*x)/(9*6) = 32/27
=>x = 4

16. Option B

[Dist./(15+x)]*2 = [Dist/(15-x)]
=>x = 5 km/hr.

17. Option C

Let the first number be x and second number be y resp.
50% of x + y = 1.25y
=>x : y = 1:2

18. Option C

Quantity of milk = 5/9*360 = 200 L
Quantity of water = 4/9*360 = 160 L
200 – (5x/9) = 160 – (4x/9)+ x
=> x = 36 L

19. Option B

Ratio of investment of A:B:C = 1500:2000:(6000-1500-2000)
= 3:4:5
Initial investment of C = 5/(3+4+5)*3600 = Rs.1500

20. Option C

Unit's digit be 4x and ten's digit be x resp.
4x+x = 10
x = 2
Required number = 28
Product of digits = 2*8 = 16

21. Option C

Total number of balls in the bag = 3x+9
Probability of drawing a re ball = 3/10
(x+2)/(3x+9) = 3/10
=>x = 7
Total number of green balls = 7+3 = 10

22. Option C

(A + B)'s 1 hour work = 1 /10
(B + C)'s 1 hour work = 1/ 15
(C + A)'s 1 hour work = 1/ 12
(A + B + C)'s hour work = 1/{ 2 [1/ 10 + 1/ 15 + 1/ 12]}
= 1/{ 2 [(6 + 4 + 5) /60] }
= 1/8
(A + B + C) can do the required work in 8 hours.

23. Option D

Let price of third variety was Rs. A per kg
Let respective amounts of these tea were x kg, x kg and 2x kg.
126x + 135x + 2Ax = 153 × 4x
⇒ 2A = 351
⇒ A = 175.5 rupee per kg

24. Option B

Base area is decreased to one-ninth it means radius is decreased to one-third.
LSA is increased by $[2\pi\times r/\ 3\times 6h\ ]/2\pi rh$ = 2 times

25. Option D

P ==== K
A 4====1
B 5====2
C 6====1
In resultant mixture, the ratio of petrol and Kerosene
= (4 × 49 + 5 × 35 + 6 × 35) : (1 × 49 + 2 × 35 + 1 × 35)
= 83 : 22

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9. Total no. of balls = 2 + 3 + 2 = 7
The probability that none is blue = $\frac{5C_2}{7C_2} = \frac{10}{21}$ ans.

27. A) 16

Solution:

20 men in 8 days so 16 men in 20 × 8/16 = 10 days and
25 women in 12 days so 10 women in 25 × 12/10 = 30 days
So in 3 days, they complete (1/10 + 1/30) × 3 = 2/5
So remaining work = 1 – 2/5 = 3/5
20 m 1 work in 8 days and x men 3/5 work in 6 days
So 20 × 8 × 3/5 = x × 6 × 1
So, x = 16 men