Statement Test 7

1. Population of city in 2020 was 46575. If the population of city was increased by 15% in 2018, decreased by 40% in 2019 and increased by 25% in 2020 than previous year, then what was the population of city in 2018?
(A) 86000 (B) 78000 (C) 54000 (D) 63000 (E) None of these

2. Interest earned on compound interest on a certain sum money at 15% per annum for two years is 9500 less than the interest earned on simple interest at 8% per annum for 7 years on same sum of money, then find the sum of money.
(A) Rs. 25000 (B) Rs. 30000 (C) Rs. 35000 (D) Rs. 40000 (E) None of these

3. 4 men and 3 women together can do a work in 5 days while 2 men and 3 women together can do same work in 7 days. In how many days will 5 women and 7 men complete the 60% work?
(A) 2.35 days (B) 1.75 days (C) Rs. 3.56 days (D) 4.78 days (E) None of these

4. The income of P is Rs. 18000 while the income of Q is 55.55% more than the income of P. The ratio of expenditure and savings of P is 7 : 11 respectively. Q spends Rs. 14000 more than he saves. The expenditure of Q is what percent more than the savings of P?
(A) 88.88% (B) 90.90% (C) 72.72% (D) 63.63% (E) None of these

5. The difference between squares of two numbers is 1176 while the difference between the numbers is 14. Find the difference between cube of those numbers.
(A) 78457 (B) 74774 (C) 77533 (D) 78933 (E) None of these

6. Rs. 12600 invested at simple interest of 18% per annum yields the same interest after 5 years as Rs. 18000 when invested at simple interest of X% per annum yields after 9 years. Find the value of X.
(A) 7 (B) 8 (C) 9 (D) 6 (E) None of these

7. A two digit number is such that the sum of its digit is 9. When the digits of the number are interchanged, then the number decreases by 9. Find the new number.
(A) 67 (B) 45 (C) 54 (D) 27 (E) None of these

8. Perimeter of a rectangle is 40 cm and the area of this rectangle is 96 cm2. If the radius of a circle is 58.33% of the length of rectangle, then find the area of circle.
(A) 196 cm2 (B) 144 cm2 (C) 192 cm2 (D) 154 cm2 (E) None of these

9. 4 years ago, the ratio of ages of Nirmala and Smriti was 9 : 11 respectively. 16 years from now, age of Nirmala is 12.5% less than that of Smriti's age. Find the ratio of present ages of Smriti and Nirmala.
(A) 6 : 5 (B) 5 : 6 (C) 2 : 5 (D) 1 : 5 (E) None of these

10. A shopkeeper made a profit of 20% by selling an article. What would be his new profit %, If he had paid 10% less for it and the customer paid 10% more for it?
(A) 42.66% (B) 42.5% (C) 46.67% (D) 45.67% (E) None of these

11. A container contains a mixture of soda and water in the ratio 7 : 5. When 9 litres of mixture is drawn off and the container is filled with water, the ratio of soda and water becomes 7 : 9. How many litres of soda was contained by the container initially? (A) 21 L (B) 24 L (C) 22 L (D) CND (E) None of these

12. Pawan and Kusum started working together but after a few days, Pawan left the work and the whole work was completed in 24 days. If Pawan and Kusum can complete the work in 25 and 40 days respectively, then find after how many days Pawan left? (A) 15 days (B) 10 days (C) 12 days (D) 24 days (E) None of these

13. Anupam sPends 40% of his salary on rent, 18% on food, 12% pm transport and 5% on entertainment and saves the remaining. Due to an accident, he has to borrow Rs. 16000 from his friend to pay the hospital bill of Rs. 20000. Find his salary. (A) Rs 14000 (B) Rs. 18000 (C) Rs. 20000 (D) Rs. 16000 (E) None of these

14. Pipes P and Q can fill a tank in 12 hours and 8 hours, respectively. If pipe R is opened along with pipe P and Pipe Q, then the tank gets filled in 24 hours. Find the time taken by pipe R to empty (7/4)th part of the tank.
A) 10.5 hours (B) 12.6 hours (C) 8.5 hours (D) 7.5 hours (E) None of these

15. A boat takes 280 minutes to cover 98 km in still water. Also, the time taken by the boat to cover 54 km in upstream is 1 hour more than time taken by it to cover 48 km downstream. Find the speed of the stream.
A.3 km/hr B.5 km/hr C.2 km/hr D.1 km/hr E.7 km/hr

16. The present age of Riya and Tina is in the ratio 4 : 7. After 9 years there ages will be in the ratio 5 : 8. Find the age of Arun 5 years ago if he is 10 years younger to Tina. (A)30 years (B) 48 years(C)42 years(D)36years(E) None

17. The average weight of girls in class is 28 kg and average weight of class is 34 kg. If the ratio between number of girls and boys is 7 : 8, Then find the average weight of boys. (A) 37.50% (B) 39.25% (C) 35.75% (D) 32.25% (E) None of these

18. Three natural numbers are picked from first 50 naturals number what is the probability that all three number are divisible by 3 and 4?
(A) 1/50C3 (B) 2/50C3 (C) 3/50C3 (D) 4/50C3 (E) None of these

19. A train 75 m long overtook a person who was walking at the rate of 6 km/hr, passed him in 7 1/2 seconds. Also it overtook a second person in 6 3/4 seconds. What was the speed of the second person?
A) 2km/h B) 3km/h C) 3.5km/h D) 5.55 km/h E) none of these

20. A reduction of 40% in the price of wheat would enable a purchaser to obtain 36 kg more for Rs. 45. What is the reduced price per kg?
A) 30p B) 45p C) 50 p D) 25p E) None of these

21. A dishonest rice seller sells rice at 15% profit of rice CP, and he also uses 800gm weight in place of 1kg.Find his total profit percent.
A) 30 % B) 25% C) 33 1/3 % D) 38 2/3 % E) 43 3/4 %

22. Sides of the parallelogram are in the ratio of 4:3, and its area is 1500 sq. units. Altitude on the greater side is 15 units. Find out the Altitude on the smaller side is?
A) 15 units B) 25 units C) 20 units D) 22.5 units E) None of these

23. Rs. 1800 is given at 20% per annum SI while Rs (1800 – P) is given at 30% per annum CI. If the difference between both interests at the end of two years is Rs 315. Find P. a. 200 b. 400 c. 300 d. 100 e. 500

24. 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. 22 b. 27 c. 25 d. 28 e. 21

25. A and B sold two articles at 25% profit and 40% profit respectively. If total profit is Rs. 178 and the cost price of A is Rs 120 less than B. find the CP of B.
a. 280 b. 200 c. 320 d. 220 e. 300

26. A costs four times as mush as B . A is sold at a loss of 35% and B is sold at a profit of 60%. If theselling price of A is Rs.1620 more than the selling price of B, what is the cost price of A?
a. 6150 b. 6600 c. 6161 d. 6480 e. 6250

27. A solution of 'Nimboopani' has 35% sugar. Another solution has 15% sugar. How many litres of the second solution must be added to the 40 L of first solution to make a solution of 25% sugar?
a. 60 b. 40 c. 80 d. 50 e. 20

1. Ans. (C)
Population of City in 2018
= 46575/(1.15 × 0.6 × 1.25)
= 46575/0.8625 = 54000
2. Ans. (D)
Sum of Money
= 9500/(0.08 × 7 – 1.152 + 1)
= 9500/(1.56 – 1.3225)
= 9500/0.2375 = Rs. 40000
3. Ans. (B)
(4m + 3w) × 5 = (2m + 3w) × 7 20m + 15w
= 14m + 21w 6m = 6w m
= w 5 women & 3 women complete 60% work in
= (2m + 3w) × 7 × 0.6/(7m + 5w)
= (2m + 3m) × 4.2/(7m + 5m)
= 5 × 4.2/12 = 1.75 days
4. Ans. (B)
Income of P = 18000 Rs.
Saving of P = 18000 × 11/18
= 11000 Rs.
Income of Q = 18000 × 14/9
= 28000 Rs.
Expenditure of Q = (28000 + 14000)/2
= 42000/2 = 21000 Rs.
Required%
= (21000 - 11000)/11000 × 100
= 90.90%
5. Ans. (B)
a - b = 14
a2 - b2 = 1176
a + b = 1176/14 = 84
a = (84 + 14)/2 = 49
b = (84 - 14)/2 = 35
a3 - b3 = 493 - 353
= 117649 - 42875 = 74774
6. Ans. (A)
12600 × 18 × 5 = 18000 × X × 9
X = (1400 × 5)/1000 = 7
7. Ans. (B)
Unit digit = x, 10th place digit = (9 - x)
Number = 10 × (9 - x) + x = (90 - 9x)
New Number = 10 × x + (9 - x)
= (9 + 9x)
(90 - 9x) - (9 + 9x) = 9
81 - 18x = 9
18x = 72
x = 4
New number = 10 × 4 + (9 - 4)
= 40 + 5 = 45
8. Ans. (D)
Length of Rectangle = x cm
Width of Rectangle
= (40/2 - x) = (20 - x) cm
x × (20 - x) = 96
x2 - 20x + 96 = 0
(x - 8)(x - 12) = 0
x = 8, 12
Length = 12 cm,
Width = 20 - 12 = 8 cm
Radius of Circle = 12 × 7/12 = 7 cm
Area of Circle = 22/7 × 72 = 154 cm2
9. Ans. (A)
4 years ago, Age of Nirmala = 9x years Age of Smriti = 11x years (9x + 20) = 0.875 × (11x + 20) 9x + 20 = 9.625x + 17.5 0.625x = 2.5 x = 4 At present, Smriti : NIrmala = (11 × 4 + 4) : (9 × 4 + 4) = 48 : 40 = 6 : 5
10. Ans. (C)
Actual CP = x Rs., Actual SP = 1.2x Rs. New CP = 0.9x Rs., New SP = 1.2x × 1.1 = 1.32x Rs. New P% = (1.32x - 0.9x)/0.9x × 100 = 46.66%
11. Ans. (A)
Initially, Soda = 7x L, Water = 5x L (7x - 9 × 7/12)/(5x - 9 × 5/12 + 9) = 7/9 9 × (7x - 5.25) = 7 × (5x + 5.25x) 63x - 47.25 = 35x + 36.75 28x = 84 x = 3 Initial Quantity of Soda = 7 × 3 = 21 L
12. Ans. (B)
Pawan □□25 8 } 200 { KusuM □□40 5 Pawan left after = (200 - 24 × 5)/8 = (200 - 120)/8 = 80/8 = 10 days
13. Ans. (D)
Salary of Anupam = (20000 - 16000)/(1 - 0.4 - 0.18 - 0.12 - 0.5)
= 4000/(1 - 0.75) = 4000/0.25
= 16000 Rs.
14. Ans. (A)
P □□12 2 } 24 { Q □□8 3 Efficiency of R = 2 + 3 - 24/24 = 5 - 1 = 4 Pipe R empty (7/4)th part of tank in = (24 × 7/4)/4 = 10.5 hours
15.Solution
280 minutes = (280/60) = (14/3) hours
So, speed of the boat in still water = 98 ÷ (14/3) = 21 km/h
Let the speed of the stream = 'y' km/h
Then, according to the question,
{54 ÷ (21 - y)} - {48 ÷ (21 + y)} = 1
Or, {54 X 21 + 54y - (48 X 21 - 48y)} ÷ (21^2 - y^2) = 1
Or, (1134 + 54y - 1008 + 48y) = 441 - y^2
Or, 126 + 102y = 441 - y^2
Or, y^2 + 102y - 315 = 0
Or, y^2 - 3y + 105y - 315 = 0
Or, y(y - 3) + 105(y - 3) = 0
Or, (y + 105)(y - 3) = 0
Since speed cannot be negative, so y = 3
Therefore, speed of stream = 3 km/hr
Hence, option a.

16. Ans. (B)
(4x + 9)/(7x + 9) = 5/8
8 (4x + 9) = 5 (7x + 9)
32x + 72 = 35x + 45
3x = 27
x = 9
5 year ago, Age of Arun
= (7 × 9 – 10) – 5 = 48 years.
17. Ans. (B)
Average Weight of Boys
= (15 × 34 – 7 × 28)/8
= (510 – 196)/8 = 314/8 = 39.25 kg
18. Ans. (D)
From first 50 natural numbers, Number divisible by 3 & 4 = 12, 24, 36, 48
Probability = 4C3/50C3 = 4/50C3
19. Option A
Solution –
Let, speed of train in km/h= x
(x-6) * 5/18 = 75 * 2/15,
Solving, we get = 42 km/h
Now, assume speed of second person is y km/hr,
So, (42-y) * 5/18 = 75 * 4/27
Solving, we get y = 2km/h
20. Option C
Solution –
Assume, purchaser buy 100 kg in Rs.45
Now the new price is 60/100 * 45 = 27,
It means in Rs. (45-27) = 18, 36kg more wheat is purchased.
Rs 18= 1800p
Now, 1800/36= 50 p
21. Option E
Solution –
Initial profit on CP = 15%
Again profit , (1000-800)/800 *100 = 25%
Use successive method,
15 + 25 + (15)(25)/100= 43.75% or 43 ¾ %
22. Option C
Solution –
Let the side of parallelogram be = 4x and 3x
Area of parallelogram = basic * height
Given area= 1500 units, so,
4x*15= 1500
X = 25 units
Sides = 4*25 and 3* 25= 100 and 75 units,
Now, height = 1500/75= 20 units
23. Option C
Total S.I. = 1800×2×20/ 100 = Rs. 720
Total C.I. = (1800 − p) [(1 + 30 100) 2 − 1] = (1800 − P) × 69/ 100
ATQ, (1800 − P) × 69/ 100 − 720 = 315
(1800 − P) = 100/ 69 × 1035
1800 − P = 1500
⇒ P = 300
24. Option C
Let, age of A be 'x' years.
Then age of B = 'x + 10' years
And age of C = 3x years
ATQ, (x+10+11)/ 3x = 3/ 2
(x + 21)2 = 9x
7x = 42
⇒ x = 6
Age of C after 7 years = 3x + 7
= 18 + 7 = 25 years
25. Option C
Let, CP of B be x + 120
And that of A be x
Then, 25/100 × x + 40/100 (x + 120) = 178
65x /100 + 48 = 178
x = 200
C.P. of B = x + 120 = Rs. 320
26. Option D
SP of A = 0.65*400x = 260x
SP of B = 1.6*100x = 160x
Diiference = 260x – 160x = 1620
=> x = 16.2
CP of A = 400x = 400*16.2 = Rs.6480
27. Option B
Sugar in first solution = 40*35/100 = 14L
Sugar in second solution =15*x/100 = 3x/20L
Total quantity = 40+x L
Now , [14+3x/20]/(40+x) = ¼
=>x = 40 L