

# Data Sufficiency Questions for SBI PO Mains, IBPS PO Mains and RBI Grade B Exams.

# Data Sufficiency Quiz 14

Directions: Each of the questions below consists of a question and three statements numbered I, II and III given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read all the statements and give answer:

1. While writing first N natural numbers, I missed one number. What is the number that I missed?

Statement I: The sum of all the natural number which I wrote, is 320.

Statement II : The digit I missed is an odd number.

Statement III : if I had not missed the number then sum would have been 325.

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The Question Bank

- A. Either statement III alone or statements I and II together are sufficient.
- B. Only statement I is sufficient.
- C. Only statement I and II together are sufficient.
- D. Only statement I, II, and III together are sufficient.
- E. None of these
- 2. A triangle is circumscribed by a circle. What is the perimeter of the triangle?

**Statement I** : The circumference of the circle is  $28\pi$  cm.

**Statement II :** The largest side of the triangle is diameter of the circle.

**Statement III :** The triangle is an isosceles triangle.

- A. Either statement III alone or statements I and II together are sufficient.
- B. Only statement I is sufficient.
- C. Only statement I and II together are sufficient.
- D. Only statement I, II, and III together are sufficient.
- E. None of these

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**3.** What is the respective speed of the two trains, A and B of length 150 meters and 175 meters respectively?

**Statement I** : They take 5 seconds to cross each other when they are running in opposite direction.

**Statement II :** They take 65 seconds to cross each other where running in the same direction.

**Statement III :** The sum of their speed is 65 m per sec.

- A. Either Statement I and II together or Statement II and III together is sufficient.
- B. Only statement I is sufficient.
- C. Only statement I and II together are sufficient.
- D. Only statement I, II, and III together are sufficient.
- E. None of these
- **4.** A sum of Rs. 229 was divided among a, b, and c. What is the difference between the share of a and that of b?

Statement I: The share of c is 40% less than the sum of the share of a and b. Statement II: The difference between b's share and c's share is Rs. 4. Statement III: The share of c is greater than the share of b.

- A. Either Statement I and II together or Statement II and III together is sufficient.
- B. Only statement I is sufficient.
- C. Only statement I and II together are sufficient.
- D. Only statement I, II, and III together are sufficient.
- E. None of these
- **5.** A dishonest merchant professes to sell his article at Cost price but uses a faulty scale while selling. What is the profit percentage does the merchant make when he sells the article at Cost Price?

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Statement I: The cost price of the article is Rs. 25 per kg.

**Statement II:** He uses a scale which weighs less by 20%

**Statement III :** If he had sold the articles at 20% profit on cost price then his net profit percentage would have been 50%.

- A. Either Statements II or III alone is sufficient.
- B. Only statement I is sufficient.
- C. Only statement I and II together are sufficient.
- D. Only statement I, II, and III together are sufficient.
- E. None of these

**6.** The mean temperature of Monday to Wednesday is 32°C and the temperature of Tuesday is 42°C. What is the temperature of Monday?

**Statement I:** The temperature of Monday is 20% less than the temperature of Wednesday.

**Statement II:** The mean of the temperature of Tuesday and Wednesday is 36°C. **Statement III :** The difference between the temperature of Monday and that of Friday is 8°C.

- A. Either Statement I or Statement II alone are sufficient.
- B. Only statement III is sufficient.
- C. Only statement I and III together is sufficient.
- D. Statement I, II, and III together are sufficient.
- E. None of these
- **7.** A milk man mixes water with 10 litres of pure milk and sell the solution at the cost price of milk. How many litres of water did he mix?

Statement I: The cost price of one litre pure milk is Rs. 40.

**Statement II:** If he had added 2 litres water more, then his profit percentage would have been 40%.

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Statement III: He earns a total profit of 20%.

- A. Either statement III alone or statements I and II together are sufficient.
- B. Only statement III is sufficient.
- C. Only statement I and III together is sufficient.
- D. Statement I, II, and III together are sufficient.
- E. None of these
- **8.** In a cricket match, the runs scored by four players, A, B, C, and D together is 264. What are the runs scored by player D?

Statement I: The average of the runs scored by B, C, and D is 56.Statement II: The average of the runs scored by C and D is 50.Statement III: The average of the runs scored by A and D is 73.

- A. Either statement III alone or statements I and II together are sufficient.
- B. Only statement III is sufficient.
- C. Only statement I and III together is sufficient.
- D. Statement I, II, and III together are sufficient.
- E. None of these

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**9.** The age of Nisha is x years, the age of Sheela is y years, and the age of Sunny is z years. If the age of Sunny is equal to the age of Nisha, then is the age of Sheela is equal to the age of sunny?

**Statement I**: The product of the sum of the age of Sunny and Nisha, and the sum of the reciprocal of the age of Sunny and Nisha is equal to 4.

**Statement II**: The product of the sum of the age of Sheela and Nisha, and the sum of the reciprocal of the age of Sheela and Nisha is equal to 4.

**Statement III** : 2(x - 50) = 2(y - 50)

- A. Either statement III alone or statements I and II together are sufficient.
- B. Only statement III is sufficient.
- C. Only statement I and III together is sufficient.
- D. Either Statement II or Statement III alone is sufficient
- E. None of these
- **10.** Shatabdi express leaves Delhi for Patna at 9 : 00 am. Can it reach Patna before 9 : 00 pm on the same day?

**Statement I :** The average speed of the Shatabdi express during the whole journey without stoppage is less than 70 km/hr

Statement II : The distance from Delhi to Patna is greater than 825 km. Statement III : It stops five times in between Delhi and Patna.

- A. Either statement III alone or statements I and II together are sufficient.
- B. Only statement III is sufficient.
- C. Only statement I and III together is sufficient.
- D. Either Statement II or Statement III alone is sufficient
- E. None of these

# **Correct Answers:**

1	2	3	4	5	6	7	8	9	10
В	D	Α	D	Α	Α	Α	С	D	E

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# **Explanations:**

# 1.

Sum of the first N natural number =  $\frac{n(n + 1)}{2}$ 

Let I missed number x then,

# From the statement I :

 $\frac{N(n+1)}{2} - x = 320, N(N+1) - 2X = 640$ 

Product of two consecutive number -2x = 640

Product of two consecutive number = 640 + 2x

It means, the Product of two consecutive number should be greater than 640

The first possible number =  $25 \times 26 = 650 = 640 + 2x$ 

it means, the number of terms = 25 = n

and x = 5

If we take n = 26 then

 $26 \times 27 = 702 = 640 + 2x$ 

In this case, x = 31 which is greater than 26 therefore only n = 25 is possible

Hence, we can conclude our answer to this statement.

## From the statement II :

we can conclude only the condition that the number I missed was an odd number. To this statement it is not possible to get a unique answer.

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## From the statement III :

we can conclude the sum of all the number without missing any number but we don't have any information about the number I missed.

Hence, option B is correct.

2. From the statement I : we can conclude, the radius of the circle = 14 cm therefore the diameter of the circle = 28 cm.

**From the statement II** : we can conclude that the largest side of the triangle = 28 cm and it is circumscribed by a circle therefore it will be a right - angled triangle because diameter make 90 degree at any point on the circumference.

From the statement III : we can conclude that it is an isosceles triangle.

If we combine all the statements then we can conclude that we need to find the perimeter of an isosceles right – angle triangle the hypotenuse of which is 28 cm (the diameter of the circle).

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By the Pythagorean theorem, we can get our unique answer.

Hence, option D is correct.

**3.** From the question, the length of train A = 150 meters and let the speed = x m/sec

And the length of train B = 175 meters and the speed = y m per sec

From the statement I, distance = speed × time

 $325 = (x + y) \times 5$ 

x + y = 65 ----- (i)

From the statement II, x - y = 5 ------ (ii)

If we combine the statement I, and II and solve the equation then we can get our answer.

From the statement III, x + y = 65 ------ (iii)

If we combine statement II, and III then we can get our answer.

Hence, option A is correct.

www.smartkeeda.com | testzone.smartkeeda.com SBI | RBI | IBPS | RRB | SSC | NIACL | EPFO | UGC NET | LIC | Railways | CLAT | RJS 4. From the question, a + b + c = 229 ...... (i) From the statement I, c = 60% (a + b) = > 3a + 3b = 5c ...... (ii) Multiply equation (i) by 5 and add both the equation then we can get a + b but we cannot find a - b. From the statement II, |b - c| = 4 [The modulus sign is given because we do not know whether b > c or c > b] From the statement III, we conclude that c > b Therefore, by combining statement II and III c - b = 4 ..... (III) Put the value of c in the equation I, a + 2b = 225 .....(iv) Put the value of c in the equation (ii), 3a - 2b = 20 ..... (v) By solving equation iv and v we can get the values of a and b and hence we can find their difference as well Therefore, answer can be concluded by combining all the statements. The Question Bank Hence, option D is correct. 5. From the statement I, we can conclude that the CP = 25From the statement II, when he sells 100 units that time scale weighs only 80 units

Let the cp of one unit = Rs. 1 then the CP of 80 units = Rs. 80 and the SP of 80 units = Rs. 100

From here we can conclude the profit percentage as 25%. Here we need to calculate percentage value so we don't have need to exact cost price.

From the statement III, let he sells total 100 units. And the CP of one unit = Rs. 1

Then the SP of 100 units = 120% of 100 = 120 and the net profit percentage = 50% therefore, CP = 80 it means he uses 20% less weight

If he had sold the article at CP then his profit would have been 25%

Hence, option A is correct.

# 6. From the statement I,

Let the temperature of Wednesday be 5x , so temperature of Monday is 4x

So,  $4x + 42 + 5x = 32 \times 3$ 

#### x = 6

Therefore, the temperature of Monday = 24°C

From the statement II, We can conclude the temperature of Monday =  $42 \times 3 - 36 \times 2 = 24^{\circ}$ C

**From the statement III,** We could not conclude the temperature of Monday because difference is given of Monday and Friday

Hence, option A is correct.

**7.** Let he adds x litres of water then from the statement I we can only conclude only the SP and CP of mixture.

But if we combine statement I and II together then we can conclude our answer as 2 litres because if profit is 40% then he has to add total of 4 litres of water which is 2 litres more as stated in the question.

From the Statement III, alone we can conclude that the quantity of water = 2 litres as the profit is 20%

Hence, option A is correct.

# **8.** A + B + C + D = 264

## From the statement I,

We can conclude the value of A as 96. So statement I alone is not sufficient

#### By statement II

We will not be able to get the value of D as average of C and D is given. So statement II alone is not sufficient.

#### By statement III

We will not be able to get the value of D as average of A and D is given . So statement III alone is not sufficient.

Now if we put the value of A from Statement I in the statement III then we can find the value of D. Hence Statement I and Statement III together are sufficient Hence, option C is correct.

# **9.** From the statement I :

$$(x + z) \left(\frac{1}{x} + \frac{1}{z}\right) = 4$$

By solving x = z which is also given in the question so we could not conclude our answer.

# From the statement II :

$$(x + y) \left(\frac{1}{x} + \frac{1}{y}\right) = 4$$

By solving, x = y

In question, it is given that x = z therefore x = y = z

By the statement III, 2x = 2y therefore, x = y

In question, it is given that x = z therefore x = y = z

Hence, option D is correct.

# **10.** From the statement I

It is clear that the average speed is less than 70 km per hrs. even without stoppage,

## From the statement II

We cannot conclude the distance as it is given that distance > 825.

## From the statement III

We can conclude that it stops for five times in between Delhi and Patna but we cannot conclude for how long it stops so it is not possible to get out answer even by all the statements.

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Hence, option E is correct.



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