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Data Sufficiency Questions for SBI PO Pre, IBPS PO Pre, SBI Clerk Mains and IBPS Clerk Mains Exams

Data Sufficiency Quiz 8

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. A person can purchase three articles in Rs. 49. What is the price of costliest article?

Statement I : The cost price of two articles each is Rs. 1 less than the cost price of costliest article.

Statement II : The cost price of two articles is same.

Statement III : The cost price of costliest article is 6.25% more than the cost price of cheapest article.

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

2. Shatabdi Express leaves Patna at 8:00 am for Delhi. At what time will it reach Delhi?

Statement I : For the first 100 km it travels at the speed of 250 km per hour and maintains the same speed during the entire journey.

Statement II : It has 5 stoppages in between Delhi and Patna.

Statement III : Before every stoppages, it covers a same distance of 240 km

- A. Either statement III alone or statements I and II together are sufficient.
B. Only statement III 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

3. What is the sum of the age of Ram and Mohan?

Statement I : The age of Ram is 6 years more than the age of Mohan.

Statement II : 40% of the age of Mohan is equal to 30% of the age of Ram.

Statement III : The ratio between half of the age of Ram and one third of the age of Mohan is 2 : 1.

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

4. In a kilometre race, by how many meters Chandu beats Chand?

Statement I : In a kilometer race, Chandu beats Chandan by 100 meters.

Statement II : The respective ratio of the speed of Chandan and Chand is 4 : 3.

Statement III : In a kilometer race, Chandan beats Chand by 150 meters.

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

5. A metal block of density 'D' and mass 'M', in the form of a cuboid, is beaten into a thin square sheet of thickness 't', and rolled to form a cylinder of the same thickness. Find the inner radius of the cylinder—

Statement I : Cuboid has dimensions 10cm x 5 cm x 12 cm

Statement II : Thickness 't' = 1.5cm

Statement III : Mass of block, M = 216kg

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

6. On a recent journey Aman drove from City A to city B to city C. His average speed for the whole journey was 60 km/hr. Find the average speed on his journey from city B to city C.

Statement I : Average speed during the journey from city A to city B is 48 km/hr

Statement II : Total time taken for the entire journey is 3 hours

Statement III : Ratio of distance travelled while going from A to B and B to C is 2 : 3

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

7. How much profit did the company earn in the year 2002?

Statement I : The company earned 40% more profit in the year 2003 than that in the year 2001.

Statement II : The company earned a total profit of Rs. 20 crores in the years 2001 and 2002 taken together.

Statement III : In the year 2003, the company earned 80% of the profit earned in 2002.

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

8. Prena works for 4 days and leaves the job. In how many days can Prena alone finish the entire work?

Statement I: Rupa finishes the remaining work in 8 days.

Statement II: Prena and Rupa together can finish the work in $20/3$ days.

Statement III : The working efficiency of Rupa is double that of Prena.

- A. Any two statements together are sufficient
- B. Only statement III is sufficient.
- C. Statement I and Statement II together are not sufficient.
- D. Only statement I, II, and III together are sufficient.
- E. None of these

9. A sum of money is put at compound interest for 2 years. What is the rate of interest per annum?

Statement I: If the same amount of money is put at simple interest for three years then the amount of interest is Rs.600 more than the interest amount calculated on CI at the end of 2 years

Statement II: The simple interest on the same sum at the end of four years is Rs.3200

Statement III : Sum of money becomes 4 times in two years at compound interest

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

10. At what time will be Duronto Express reach Delhi from Lucknow.

Statement I: The train crosses another train of equal length of 200 metre and running in opposite direction in 15 secs.

Statement II: The train leaves Lucknow at 7.15 am for Delhi, situated a distance of 560 kms.

Statement III : Duronto Express has length 300 meter crosses a signal pole in 10 secs.

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

Correct Answers:

1	2	3	4	5	6	7	8	9	10
A	E	C	C	C	D	D	A	A	C

Explanations:

1. From the Statement I

Let the CP of each of two cheapest articles = x and the CP of costliest article = $x + 1$

Then, $x + x + x + 1 = 49$,

$x = 16$ therefore the CP of costliest article = $16 + 1 = 17$

From the **Statement II**, we can say that the cost price of two articles is same and from **Statement III**, we can say that the cost price of costliest article is 6.25% more than the cost price of cheapest article therefore by combining both the statement we can also get our answer.

Hence, option A is correct.

2. From the Statement I we can conclude the speed of the train and by combining Statement II and Statement III, we can conclude the distance between Delhi and Patna. But we cannot conclude how long it has stopped at each stoppage because the speed we concluded from the statement I is the speed of the train not the average speed of the entire journey.

Hence, option E is correct.

3. By combining Statement I and Statement II we can conclude the age of Ram and the age of Mohan . So we can find the sum as well.

Statement II and Statement III indirectly mean the same.

So by combining Statement I and statement III we can get our answer as well.

So either Statement I and II together or Statement I and III together are sufficient.

Hence, option C is correct.

4. By combining statement I, and III we can conclude our answer as 250 meters

In the statement II, only ratio of speed is given therefore it is not possible to get our answer only with the help of statement II .

By combining Statement I and II also we can find the answer as the ratio between two people is given and in statement I the distance between the winner and loser is given so we can find the required distance as well.

So Statement I and III together or Statement I and II together are sufficient

Hence, option C is correct.

5. If we have the dimensions, from Statement a, 

Volume of cuboid = $10 \times 5 \times 12 = 600\text{cm}^3$

If thickness is 't' and let side of square sheet be S, then,

$$600 = (S^2) \times (t)$$

If $t = 1.5\text{cm}$ is taken from Statement II,

$$\frac{600}{1.5} = (S^2) = 400$$

$$S = 20\text{cm}$$

Height of cylinder = $S = 20\text{cm}$ [As square sheet is rolled so the side of the cylinder will be equal to side of square]

$$\text{Outer circumference} = S = 20\text{ cm} = 2\pi r$$

$$\text{Or, } r = \frac{10}{\pi} \approx 3.185$$

Thickness taken, $t = 1.5\text{cm}$

So inner radius = $3.185 - 1.5 = 1.685\text{ cm}$

Whereas Statement III has no significance anywhere.

But none of the statement alone can answer the question individually.

Hence, answer is using statement I and II together is sufficient

Hence, option C is correct.

6. Given, on a recent journey Aman drove from City A to city B to city C. His average over the whole journey was 60 km/hr.

From statement I, average speed during journey from city A to city B is 48 km/hr.

From statement II, total journey time is 3 hours

From statement III, ratio of distance travelled while going from A to B and B to C is 2 : 3.

Thus, statement I and II, II and III or I and III are not sufficient to answer the question.

From statement III,

Let the distances to be covered be $2x$ and $3x$ respectively.

Total distance covered = $2x + 3x = 5x$

$$\text{Average speed} = \frac{\text{total distance}}{\text{total time}}$$

$$\Rightarrow \frac{5x}{3} = 60$$

$$\Rightarrow x = 36 \text{ km}$$

Now, distance travelled from city A to city B = $2x = 72$ km

Let the time of this journey be 't'

$$72/t = 48$$

$$\Rightarrow t = 1.5 \text{ hours}$$

Thus, time taken for journey from city B to city C = $3 - 1.5 = 1.5$ hours

Distance travelled in this journey = $3x = 108$ km

Average speed on the journey from city B to city C

$$= \frac{108}{1.5} = 72 \text{ km/hr}$$

Thus, statement I, II and III are together sufficient

Hence, option D is correct.

7. Taking all statement together,
 Let the profit earned by company in 2001 = Rs. x and in 2002 = Rs. y
 Profit earned in 2003 = 1.4x
 $x + y = \text{Rs. } 20 \text{ crore (i)}$

From statement III,

$$1.4x = y \times \frac{80}{100}$$

$$x = \frac{4}{5} \times \frac{1}{1.4} y$$

$$x = \frac{4}{7} y \text{ (ii)}$$

From equation (i) and (ii), we can get the required profit.
 So all the statements are required to find profit in the year 2002.
 Hence, option D is correct.

8. Let Prena can finish the work in x days alone.

From I,

Prena has worked for 4 days and done $\frac{4}{x}$ part of the work.

The remaining work = $\frac{1-4}{x} = \frac{x-4}{x}$ part will be done by Rupa in 8 days.

So Rupa can alone can finish the work in $\frac{8x}{x-4}$ days.

From I and II,

$$\Rightarrow \frac{\frac{8x}{x-4} \times x}{\frac{8x}{x-4} + x} = 6 \frac{2}{3}$$

$\Rightarrow x$ can be obtained. i.e. $x = 20$ days.

From III,

Rupa alone can finish the work in $\frac{x}{2}$ days.

From I and III,

$$\Rightarrow \frac{8x}{x-4} = \frac{x}{2}$$

So, x can be obtained.

From II and III,

$$\frac{x \times \frac{x}{2}}{x + \frac{x}{2}} = 6 \frac{2}{3}$$

x can be obtained. Hence, option A is correct.

9. From statements I and II:

Let the sum be P

$$SI = \frac{P \times r \times n}{100}$$

$$3200 = \frac{P \times r \times 4}{100}$$

$$\frac{3200 \times 100}{4} = P \times r$$

$$SI = \frac{P \times r \times 3}{100}$$

Replacing the value of P × r

$$SI = 3200 \times 100 \times \frac{3}{100 \times 4}$$

$$SI = 800 \times 3$$

$$SI = 2400$$

SI for first 3 years = Rs. 2400

Then CI for first two years according to statement I is Rs. 2400 – 600 = Rs. 1800

SI for 2 years = Rs. 1600

$$\text{Rate \%} = \frac{2 \times (CI - SI) \times 100}{SI}$$

$$= \frac{2 \times (1800 - 1600) \times 100}{1600}$$

$$= \frac{2 \times 200 \times 100}{1600} = 25\%$$

From statement III:

$$\text{Rate} = (\sqrt{4} - 1) \times 100\% = 100\%$$

Hence, either statement I and II together or III alone is sufficient to answer the question

Hence, option A is correct.

10. From III,

We get the speed of the Durgam Cheruvu express.

$$\Rightarrow \frac{300}{10} = 30 \text{ m/s} = 108 \text{ kmph}$$

From II,

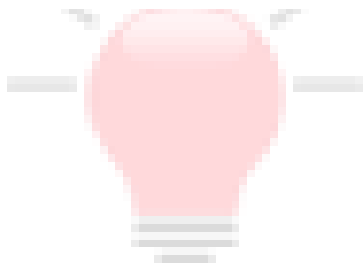
We get the distance between Delhi and Lucknow and also the starting time i.e. 7:15 am.

$$\Rightarrow \text{time to reach destination} = \frac{560}{108} = 5.18\text{h}$$

Hence II & III statements are sufficient to answer the question.

Therefore, statement I is redundant and can be dispensed with.

Hence, option C is correct.



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