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# Data Sufficiency Questions for RBI Grade B, SBIPO and IBPSPO Exams

## Data Sufficiency Quiz 3

Directions: Each of the questions below consists of a question and May Four statements numbered I, II, III and IV 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. **The following information is given about a four sided polygon.**

- I. The polygon is a rectangle
- II. The area of the polygon is given to be  $100 \text{ m}^2$ .
- III. One side of the polygon is 8 m.
- IV. All the adjacent sides are at right angle to each other.

Which of the above facts are sufficient to determine the dimensions of the polygon?

- A. Only II and III
- B. II, III and IV
- C. I, III and IV
- D. I and II
- E. Any two of the three statements are sufficient

2. **What is the capacity of the cylindrical tank?**

- I. Radius of the base is half of its height.
- II. Area of the base is  $462 \text{ sq m}$ .
- III. Height of the cylinder is 14 m.

- A. I and II
- B. II and III
- C. I and III
- D. All I, II and III
- E. Any two of the three

3. **The compound interest on a sum of Rs. 4000 is Rs. 1324. Find the rate of interest.**

- I. The simple interest on the same sum at the same rate is Rs. 1200.
- II. Compound interest is compounded every four months.
- III. The sum doubles itself in 25 years at the rate of 4% per annum.

- A. Only II and III
- B. Only I and III
- C. All the three statements I, II and III
- D. Only II and III
- E. None of the above

**4. Is the sum of the costs of a Laptop and a Modem more than the sum of the costs of a Mobile and a Headphone?**

I. 30% of the cost of the Laptop and 20% of the cost of the Modem is more than 40% of a cost of the Mobile and 60% of the cost of Headphone.

II. 20% of the cost of the Laptop and 30% of the cost of the Modem is less than 10% of the cost of the Mobile and 15% of the cost of the Headphone.

- A. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
- B. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
- C. The data in statement I alone or in statement II alone is sufficient to answer the question.
- D. The data in both the statements I and II is not sufficient to answer the question.
- E. The data in both the statements I and II together is necessary to answer the question

**5. What is the curved surface area of cylinder?**

I. The base area of the cylinder is half of the area of the region enclosed by 4 circles of equal radius of 14 cm, touching one another.

II. The volume of the cone that can be fit into the cylinder is 88 cubic units.

- A. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
- B. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
- C. The data in statement I alone or in statement II alone is sufficient to answer the question.
- D. The data in both the statements I and II is not sufficient to answer the question.
- E. The data in both the statements I and II together is necessary to answer the question

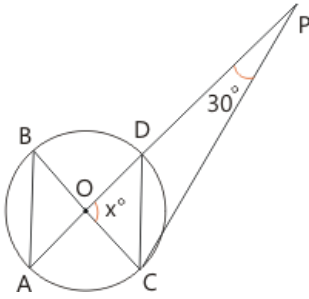
**6. A mixture of plant fertilizer consists of Nitrogen, Phosphoric acid and Potash. What is the number of grams of Potash in the mixture?**

I. By weight, the ratio of Nitrogen to Potash is 2 : 3

II. By weight, the ratio of Phosphoric acid to Potash is 4 : 3 and  $\frac{1}{3}$ rd of the weight of the mixture is Potash.

- A. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
- B. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
- C. The data in statement I alone or in statement II alone is sufficient to answer the question.
- D. The data in both the statements I and II is not sufficient to answer the question.
- E. The data in both the statements I and II together is necessary to answer the question

7. What is the value of the angle  $x$  in the adjoining figure where  $O$  is the centre of the circle?



- I. The length of arc  $CD$  is  $1/8$ th of the circumference.  
II.  $\angle CPD = 30^\circ$
- A. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.  
B. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.  
C. The data in statement I alone or in statement II alone is sufficient to answer the question.  
D. The data in both the statements I and II is not sufficient to answer the question.  
E. The data in both the statements I and II together is necessary to answer the question

8. What is the time taken by the train to cross the Agra junction platform of length 300 m?

- I. The speed of the train is 90 kmph.  
II. It takes 10 sec more to cross the Hazrat Nizamuddin platform of 500 m length than to cross the Agra junction platform, and it takes 30 sec to cross the Yamuna bridge of 400 m.
- A. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.  
B. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.  
C. The data in statement I alone or in statement II alone is sufficient to answer the question.  
D. The data in both the statements I and II is not sufficient to answer the question.  
E. The data in both the statements I and II together is necessary to answer the question

**9. P and Q are solutions of water and alcohol. If solution R consists of 3 parts of P and 4 parts of Q, what percent of solution R will alcohol form?**

- I. Solution P contained 15% of alcohol and solution Q contained 7% alcohol.
- II. There was a total of 10 litres of the solution R.

- A. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
- B. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
- C. The data in statement I alone or in statement II alone is sufficient to answer the question.
- D. The data in both the statements I and II is not sufficient to answer the question.
- E. The data in both the statements I and II together is necessary to answer the question

**10. At a Lifestyle store, Jeans sells for 10% less than T-shirt. What is the ratio of the store's revenue from the sales of Jeans to that from the sales of T-shirt?**

- I. The store sells 20% more units of Jeans than T-shirt.
- II.  $\frac{3}{4}$  of sales of T-shirts is equal to  $\frac{1}{3}$  of the sales of Jackets and  $\frac{2}{3}$  of the sales of Jeans is equal to  $\frac{1}{4}$  of the sales of Trousers.

- A. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
- B. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
- C. The data in statement I alone or in statement II alone is sufficient to answer the question.
- D. The data in both the statements I and II is not sufficient to answer the question.
- E. The data in both the statements I and II together is necessary to answer the question

**Correct Answers:**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
B	E	E	C	E	D	A	B	A	A

**Explanations:**

**1.** From the statement IV, it is clear that the polygon is a rectangle. Thus, statements I and IV are similar. Now, let the two adjacent sides of the polygon be  $x$  and  $y$ .

Then, from statements II and III,

$$xy = 100$$

$$x = \frac{100}{8} \quad (\text{if } y = 8)$$

$$\Rightarrow x = 12.5$$

Thus, to find the dimensions of the polygon, either I, II and III or II, III and IV are sufficient.

Hence, option B is correct.

**2.** To know the capacity, we have to find the volume of the cylinder, i.e.  $\pi r^2 h$ . For this, any two of the three are enough, e.g.,

Take statements I and III,

$$h = 14 \text{ m, then } r = \frac{14}{2} = 7 \text{ m}$$

$$\text{Then, } \pi r^2 h = \frac{22}{7} \times 7 \times 7 \times 14 = (22 \times 7 \times 14) \text{m}^3$$

From statements II and III,

$$\text{Area} = \pi r^2 = 462 \text{ sq m, } h = 14 \text{ m}$$

$$\therefore \text{Capacity} = \text{Area} \times h = \pi r^2 h = (462 \times 14) \text{m}^3$$

From statement I and II,

$$\text{Capacity} = (462 \times 2 \times \sqrt{\frac{462}{\pi}}) \text{m}^3$$

Hence, any two of the three is sufficient to answer this question, option (E) is correct.

**3.** Statement (III) is not an informative statement because it is true in all case. In order to find out the rate of interest, we need the time for which the sum has been deposited. But this has not been provided either in (I) or in (II). So, answer is (E).

Hence, option E is correct.

4. Let the cost of the Laptop be Rs.  $x$ , the cost of the Modem be Rs.  $y$ , the cost of the Mobile be Rs.  $P$  and the cost of the Headphone be Rs.  $q$ .

**From Statement I:**

$$0.3x + 0.2y > 0.4p + 0.6q$$

$$\Rightarrow 3x + 2y > 4p + 6q \Rightarrow x + \frac{2}{3}y > \frac{4}{3}p + 2q$$

So the sum of cost of the Laptop and  $\frac{2}{3}$  of cost of the Modem is more than the sum of the cost of  $\frac{4}{3}$  of the Mobile ( $\frac{4}{3}$  implies more than 1 here) and twice of that headphone (twice implies 2 headphones). Evidently, the sum cost of the Laptop and that of the Modem must be more than the sum of the cost of the Mobile and that of the Headphone. So, statement I alone is sufficient.

**From Statement II:**

$$2x + 3y < p + 1.5q$$

Clearly, the sum of the cost of the Mobile and 1 and a half of the Headphone is more than the sum of the cost of the two Laptops and that of the three Modems.

So, statement II alone is also sufficient.

Hence, either of the statements is sufficient to reach the answer.

Hence, option C is correct.

5. Curved surface area of a cylinder is  $2\pi rh$ .

**From statement I:** We can find the area enclosed by the four circles because their radius is given and further we can find the area of the base of the cylinder as well but as we do not know height of the cylinder, so we can't answer the question.

**From statement II:** From this statement we can find the volume of the cylinder ( $\pi r^2 h$ ) which will be thrice the volume of the cone that fits in it. Using the radius of the base from statement I we can calculate the height of the cylinder as well.

Therefore, combining statements I and II,  $r$  and  $h$  can be found and thus we can answer the question.

Hence, option E is the correct choice.

6. Since the total weight of the mixture is not given the question can't be answered.

Hence option D is correct.

**7. From statement I:**

We know that the whole circumference of a circle forms an angle of  $360^\circ$  at the centre.

Therefore, the angle subtended by the arc  $CD = \frac{1}{8}$  of  $360^\circ = 45^\circ$

$\therefore$  Statement I alone is sufficient.

**From statement II:**

Here, we are not aware of any other information except the value of angle  $CPD$ .

Hence, statement II alone is not sufficient.

Hence, statement I alone is sufficient to reach the answer.

Hence, option A is correct.

**8. From Statement I:**

The length of the train is not known. So, statement A alone is not sufficient.

**From Statement II:**

It takes 10 sec to cover  $500 - 300 = 200$  m

So, the speed of the train  $\frac{200}{10} = 20$  m/s

The distance covered in 30 secs =  $20 \times 30 = 600$  m

So, the length of the train =  $600 - 400 = 200$  m

Time taken to cross Agra junction platform of length 300 m

$$= \frac{200 + 300}{20} = 25 \text{ sec}$$

Clearly, statement II alone is sufficient to reach the answer.

Hence, option B is correct.

**9.** Let solution R contained 3k litres of P and 4k litres of Q

**Statement I:** Percentage of alcohol in solution R

$$= \frac{3k \times 15}{100} + \frac{4k \times 7}{100} = 0.45k + 0.28k = 0.73 \text{ k litres}$$

$$\text{Reqd. \%} = \frac{(0.73k) \times 100}{(3k + 4k)} = 10.43\%$$

So, statement I alone is sufficient.

**Statement II:** Since it does not mention the concentrations of the solutions P and Q we can't solve it.

Hence, Statement II is not sufficient.

Hence, option A is correct.

**10.** Let the selling price of T-shirt be Rs. x

Then, the selling price of Jeans be 0.9x

**From Statement I:** Let the number of units of T-shirt sold be y

Then the number of units of Jeans be 1.2y

Revenue from T-shirt = xy

Revenue from Jeans =  $0.9x \times 1.2y = 1.08xy$

Required ratio =  $xy : 1.08xy = 25 : 27$

**From Statement II:**

$\frac{3}{4}$  of T-shirts sales =  $\frac{1}{3}$  of Jackets sales

$\frac{2}{3}$  of Jeans sales =  $\frac{1}{4}$  of Trousers sales

From the above two equations, we can observe that there is no relation between the sales of Jeans and that of the T-shirts.

Therefore, the statement II alone is not sufficient.

Clearly, statement I is sufficient to reach the answer.

Hence, option A is correct.





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