

Data Sufficiency

Formula for Data Sufficiency and Definitions

Important Formula for Data Sufficiency is given here on this page. In data sufficiency, questions are framed to examine students reasoning, logical and decision-making skills. For this, you must read the questions properly and based on the information given in the options you have to decide whether the information is sufficient to answer or not.

Tips and Tricks and Shortcuts for Data Sufficiency:-

There are a few tips and tricks which can be followed to solve the data sufficiency questions. Candidates can refer to these tips given below:

- **Read Carefully:** Take your time to read the entire question carefully. These questions can be lengthy, but it's important not to panic and ensure you understand all the information provided.
- **Verbal Solution:** Some data sufficiency questions, especially in the quantitative aptitude section, can be solved verbally without complex calculations. Try to reason through the conditions before jumping into calculations.
- **Focus on Conditions:** Your goal is not to find the final answer in most cases, but to determine whether the given data is sufficient to answer the question. Concentrate on which conditions are necessary to reach the answer.
- **Avoid Assumptions:** Only consider the information provided in the question. Avoid making any assumptions or using external knowledge. The given data is all that you should use to solve the question.
- **Step-by-Step Approach:** Start by attempting to solve the question using the first condition provided. If it's not sufficient, move on to the second condition, and so on, until you can determine if the data is sufficient or not.

Understanding Solution Selections:

For solving data sufficiency questions you need to first understand the question and based on that, selection should be made. The questions will be asked with certain information with two statements labeled I and II. You need to analyze whether the information given in the label I and II is adequate to come to the solution or not. You should use all the data given in the

statements along with your mathematics skill and well-known facts (such as sun rises in the east or the meaning of niece), the selection is to be made from below given options:

The answer can be obtained from Statement I alone but statement II alone is not sufficient to answer the question asked;

- A. Data in statement 1 is sufficient alone to determine the answer.
- B. Data in statement 2 is sufficient alone to determine the answer.
- C. Data in either of the statements is sufficient to determine the answer.
- D. Data provided in both the statements together are not sufficient to determine the answer.
- E. Data in both statements are required to determine the answer.

Note: In data sufficiency problems, you can mark as “the data given in the statements is satisfactory” only when there is outcome or solution is in the numerical value.

Question 1.

Who is the father of A.

Statement I: x and y are brothers.

Statement II: y's wife is the sister of A's wife.

- A. Data in statement 1 is sufficient alone to determine the answer.
- B. Data in statement 2 is sufficient alone to determine the answer.
- C. Data in either of the statements is sufficient to determine the answer.
- D. Data provided in both the statements together are not sufficient to determine the answer.
- E. Data in both statements are required to determine the answer.

Answer: D

Explanation:

The statement I gives the relation between X and Y. So statement I alone cannot determine the answer. Through statement II we can determine that Y is the brother-in-law of A. Thus using both the statements you cannot determine the father of A. hence option D is correct.

Question 2.

In which year was Dhoni born?

Statement :

At present Dhoni is 21 years younger to his father.

Dhoni's brother, who was born in 2001, is 28 years younger to his father.

1. **1 alone is sufficient while 2 alone is not sufficient**
2. **2 alone is sufficient while 1 alone is not sufficient.**
3. **Either I or II is sufficient**
4. **Neither I nor II is sufficient**
5. **Both I and II are sufficient**

Answer: Both 1 and 2 are sufficient

Explanation –

From both I and II, we find that Dhoni is $(28 - 21) = 7$ years older than his brother, who was born in 2001. So, Dhoni was born in 1996.

Question 3.

What will be the total weight of 80 books, each of the same weight ?

Statements:

One-fourth of the weight of each book is 5 kg.

The total weight of three books is 20 kilograms more than the total weight of two books.

1. **I alone is sufficient while II alone is not sufficient.**
2. **II alone is sufficient while I alone is not sufficient**
3. **Either I or II is sufficient**
4. **Neither I nor II is sufficient**
5. **Both I and II are sufficient**

Answer: Either 1 or 2 is sufficient

Explanation –

From I, we conclude that the weight of each book = (4×5) kg = 20 kg.

So, total weight of 10 books = (20×10) kg = 200 kg.

From II, we conclude that:

Weight of each book = (weight of 3 book) – (weight of 2 book) = 20 kg.

So, total weight of 10 books = (20 x 10) kg = 200 kg.

Question 4.

How many children does Mahi have ?

Statements:

Harsha is the only daughter of Y who is the wife of Mahi.

Karan and Jivan are brothers of Mahi.

1. **I alone is sufficient while II alone is not sufficient**
2. **II alone is sufficient while I alone is not sufficient**
3. **Either I or II is sufficient**
4. **Neither I nor II is sufficient**
5. **Both I and II are sufficient**

Answer: 1 alone is sufficient

Explanation –

From I, we conclude that Harsha is the only daughter of Mahi. But this does not indicate that Mahi has no son. The information given in II is immaterial.

Question 5.

How much was the total sale of the shop ?

Statements:

The shop sold 2500 units of masks each costing Rs. 15.

This company has no other product line.

1. **I alone is sufficient while II alone is not sufficient**
2. **II alone is sufficient while I alone is not sufficient**
3. **Either I or II is sufficient**
4. **Neither I nor II is sufficient**
5. **Both I and II are sufficient**

Answer: Either 1 or 2 is sufficient

Explanation –

From I, total sale of 8000 units of masks = Rs. (2500 x 15) = Rs. 37500.

From II, we know that the company deals only in masks

This implies that sale of masks is the total sale of the shop, which is Rs. 37500.

EXERCISE

Directions (1-5): In each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and Give answer.

1. Question:

In which year was Rahul born ?

Statements:

I. Rahul at present is 25 years younger to his mother.

II. Rahul's brother, who was born in 1964, is 35 years younger to his mother.

- A. I alone is sufficient while II alone is not sufficient
- B. II alone is sufficient while I alone is not sufficient
- C. Either I or II is sufficient
- D. Neither I nor II is sufficient
- E. Both I and II are sufficient

2. Question:

What will be the total weight of 10 poles, each of the same weight ?

Statements:

I. One-fourth of the weight of each pole is 5 kg.

II. The total weight of three poles is 20 kilograms more than the total weight of two poles.

- A. I alone is sufficient while II alone is not sufficient
- B. II alone is sufficient while I alone is not sufficient
- C. Either I or II is sufficient
- D. Neither I nor II is sufficient
- E. Both I and II are sufficient

3. Question:

How many children does M have ?

Statements:

I. H is the only daughter of X who is wife of M.

II. K and J are brothers of M.

- A. I alone is sufficient while II alone is not sufficient
- B. II alone is sufficient while I alone is not sufficient
- C. Either I or II is sufficient
- D. Neither I nor II is sufficient
- E. Both I and II are sufficient

4. Question:

How much was the total sale of the company ?

Statements:

I. The company sold 8000 units of product A each costing Rs. 25.

II. This company has no other product line.

- A. I alone is sufficient while II alone is not sufficient
- B. II alone is sufficient while I alone is not sufficient
- C. Either I or II is sufficient
- D. Neither I nor II is sufficient
- E. Both I and II are sufficient

5. Question:

The last Sunday of March, 2006 fell on which date ?

Statements:

I. The first Sunday of that month fell on 5th.

II. The last day of that month was Friday.

- A. I alone is sufficient while II alone is not sufficient
- B. II alone is sufficient while I alone is not sufficient
- C. Either I or II is sufficient

D. Neither I nor II is sufficient

E. Both I and II are sufficient

Answer Key

1. E

2. C

3. D

4. E

5. C