Data Sufficiency

LOGICAL REASONING

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Data Sufficiency

Data Sufficiency means you need to find whether the data given the statements is sufficient to find the answer or not.

Blood Relation

In this section, relation between any 2 people will be asked and you need to find the statement/s in which data is sufficient to find the relation or the correct answer.

Direction: In the following question, a given question is followed by information in three statements. You have to decide the data in which statement (s) is/are sufficient to answer the question and mark your answer accordingly.

Symbol in Diagram	Meaning
○	Female
□	Male
=	Married Couple
—	Siblings
|	Difference of A Generation

Q. How is F related to S?

I. F is the husband of A and S is the son of B.

II. F is the father of E and D is the sister of S.

III. F is the husband of S's father's sister.

A Using the following notations, we can draw the Family Tree,

From statement I:

F is the husband of A and S is the son of B.

The relation between F and S cannot be determined here.

Therefore, the statement I alone is not sufficient to answer the question.

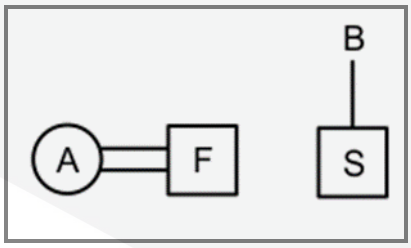

Fig : Statement 1

From statement II:

F is a father of E and D is a sister of S.

The relation between F and S cannot be determined here.

Therefore, statement II alone is not sufficient to answer the question.

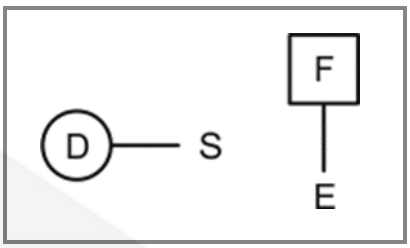

Fig : Statement 2

From statement III:

F is a husband of S's father's sister.

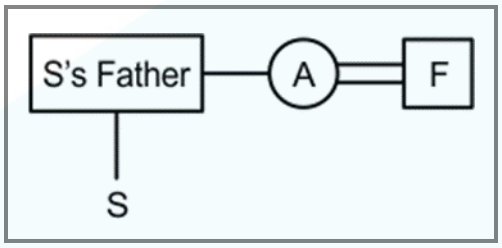

Fig : Statement 3

So, we get that F is the uncle of S.

Therefore, statement III alone is sufficient to answer the question.

On combining I and II:

The relation between F and S cannot be determined here.

Therefore, the statement I and II together are not sufficient to answer the question.

Hence, statement III alone is sufficient to answer the question.

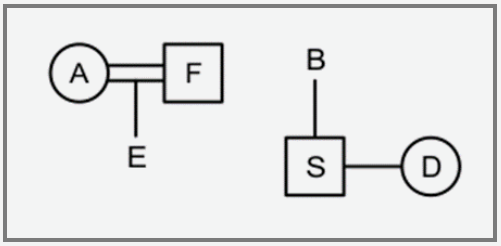

Fig : Combining I and II

Memory Tip

You only need to check whether the data is sufficient or not to find the answer. So do not waste your time in finding the final answer.

Order & Ranking

In this section, data of order of people or their ranking will be given and you need to find the statement/s in which data is sufficient to find the correct answer.

Direction: The following question consists of three statements numbered I, II and III. Decide if data given in the statements are sufficient to answer the questions below.

Q. In an innings of a T20 international match six batsman, Raina, Yuvraj, Kohli, Dhoni, Rahane and Dhawan have scored different number of runs. How many batsmen have scored more runs than Dhoni?

I. Rahane has scored 7 runs less than Yuvraj and 10 runs more than Raina.

II. Kohli has scored 56 runs i.e. 8 less than Dhoni.

III. Raina has scored 34 i.e. 1 run less than Dhawan.

A. According to statement:-

1. Raina has scored 34 i.e. 1 run less than Dhawan.
   Implies Dhawan has scored 35
2. Kohli has scored 56 runs i.e. 8 less than Dhoni.
   Score of Dhoni = 64
3. Rahane has scored 7 runs less than Yuvraj and 10 runs more than Raina.
   Rahane = 10 + Raina's score = 10 + 34 = 44
   Yuvraj = 44 + 7 = 51.

Implies no one has scored more than Dhoni.

Clearly all the statements are required to answer the question.

Direction & Distance

In this section, data of directions of people or points and the distance traveled by a person or distance between the points will be given And you need to find the statement/s in which data is sufficient to find the direction or distance between the points.

Direction: The following question consists of three statements numbered I, II and III. Decide if data given in the statements are sufficient to answer the questions below.

Q. If City A and City E are in a straight line and the distance between A and C is the equal distance between F and E then find out City A is in which direction with respect to City E?

I. A is to the north of F, which is to the west of C.

II. A is to the north-west of C.

III. E is to the north-west of F.

A. Statement I: *Figure beside*
Statement II: Does not tell the direction of E.
Statement I and III: *Figure beside*
So, Only I and III are Sufficient.

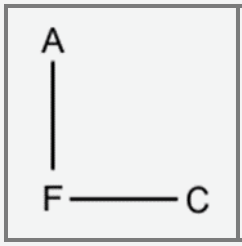

Fig : Statement I

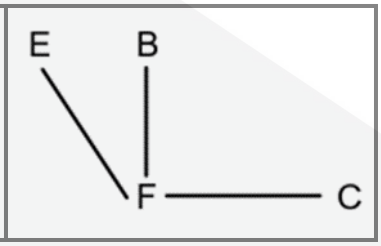

Fig : Statement I and III

Coding Decoding

In this section, words or letters will be coded and you need to find the statement/s in which data is sufficient to find the logic applied to decode the word.

Directions: The question 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 the answer.

Q. In a certain code, '14' means 'stop whispering' and '68' means 'it's irritating'. What do '8' and '6' mean respectively in that code?

Statements:

I. '167' means 'stop irritating me'.

II. '4982' means 'it's sound like whispering'.

A. Given information is
14 → stop whispering
68 → it's irritating

A. **Statement** I. '167' means 'stop irritating me'.

Using given information and this statement, 1 means stop and 6 means irritating

So, 6 means irritating and 8 means it's.

So, alone statement I is sufficient.

Statement II. '4982' means 'it's sound like whispering'.

From the given information,

4 means whispering and 8 means it's.

So, 6 means irritating and 8 means it's.

So, alone statement II is sufficient.

Thus, either I or II is sufficient.

Seating Arrangement

In this section, data of arrangement of people will be given and you need to find the statement/s in which data is sufficient to find the correct answer.

Linear Arrangement

In this section, people will be arranged or seated in one or multiple rows.

Directions: The question 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.

Q. There are seven friends P, Q, R, S, T, U, and V sitting in a row. All are facing towards the north direction. Who sits at the immediate right of P?

I. There are two persons sitting between P and V. Either P or V sits at the extreme end. There is only one person between T and R. Q sits third to the right of P.

II. S is sitting at the immediate right of T. More than one people sit between P and Q. Only one person sits between S and P. P sits in the middle of the row. Q is not a neighbor of S.

A. From statement I: There are two persons sit between P and V. Either P or V sits at the extreme end. There is only one person between T and R. Q sits third to the right of P.

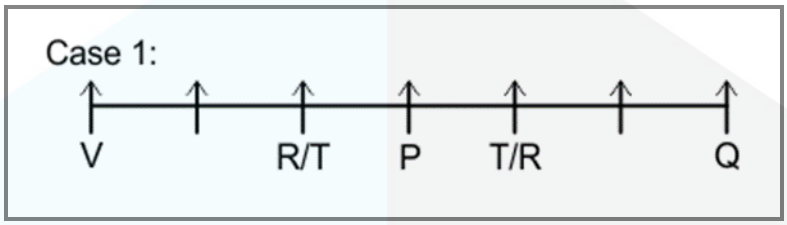

Fig : Statement I

From here we decide who sits at the immediate right of P.

From statement II: S is sitting at the immediate right of T. More than one people sit between P and Q. Only one person sits between S and P. P sits in the middle of the row. Q is not a neighbor of S.

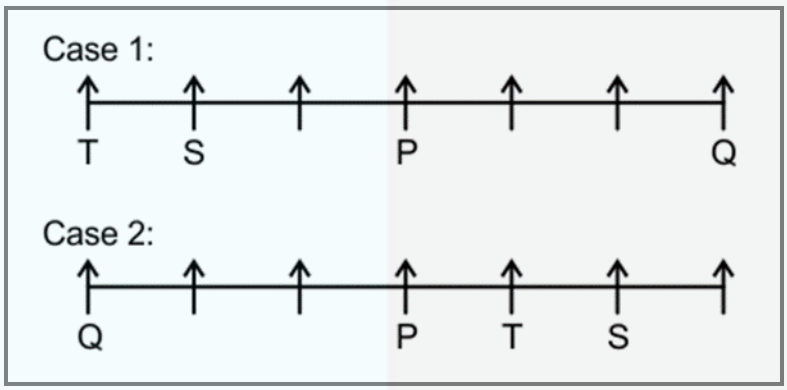

Fig : Statement II

From here we decide who sits at the immediate right of P because there are two cases.

From statement I and II:

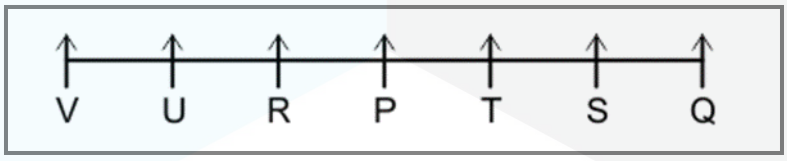

Fig : Statement I and II

From here we can get T is immediate to the right of P.

Hence, data in both the statements I and II together are necessary to answer the question.

Circular Arrangement

In this section, people will be arranged or seated around a circular table.

Directions: 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 questions.

Q. Among five friends A, B, C, D and E sitting at a circular table and facing the centre, who is sitting to the immediate left of A?

I. A is sitting third to the right of B. D is not an immediate neighbor of A.

II. B is in immediate neighbor of C.

A. <u>From Statement I:</u>

A is sitting third to the right of B. D is not an immediate neighbor of A.

As we can see in the diagram, immediate left of A is either C or E.

Hence, Data in statement I alone are not sufficient to answer the question.

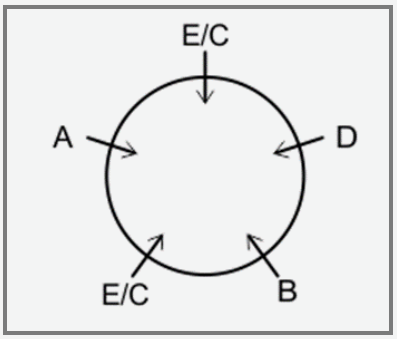

Fig : Statement I

<u>From Statement II:</u>

→ B is in immediate neighbor of C.

Nothing mention about A.

Hence, Data in statement II alone are not sufficient to answer the question.

<u>From Statement I and II:</u>

→ A is sitting third to the right of B. D is not an immediate neighbor of A.

→ B is in immediate neighbor of C.

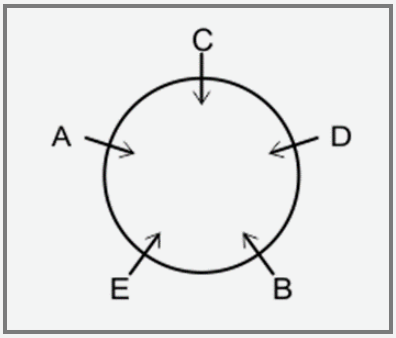

Fig : Statement I and II

As we can see in the diagram, C is sitting immediate left of A.
Hence, both the statements I and II together are necessary to answer the question.

Floor Puzzle

In this section, data of people living on different floors of either same or different buildings will be given And you need to find the statement/s in which data is sufficient to find the correct answer.

Direction: The following question is followed by information given in three statements. You have to decide the data in which statement (s) is/are sufficient to answer the question and mark your answer accordingly.

Q. A building of Samsung company has 5 floors (numbered as 1 to 5) with different products on each floor. Ground floor is numbered 1 and topmost floor is numbered 5. Mobile products are on which floor?

I. Mobile products are not on the floor 3.

II. Mobile products are on the floor which is 2 floors below the floor of Laptop products and Laptop products are neither on the floor 5 nor on 3.

III. Mobile products are neither on the topmost floor nor on the lowermost floor.

A. From statement I:

Mobile products are not on the floor 3.

Mobile products can be on 1 / 2nd / 4th / 5 floor.

Therefore, statement I alone is not sufficient to answer the question.

Floor	Product
5	
4	Laptop
3	
2	Mobile Product
1	

Table : Statement II

Floor	Product
5	
4	
3	~~Mobile Product~~
2	
1	

Table : Statement I

From statement II:

Mobile products are on the floor which is 2 floors below the floor of Laptop products and Laptop products are neither on the floor 5 nor on 3.

Only possible option for Laptop products is the 4th floor, so Mobile products are on the 2nd floor.

Therefore, statement II alone is sufficient to answer the question.

Floor	Product
5	~~Mobile Product~~
4	
3	
2	
1	~~Mobile Product~~

Table : Statement III

On combining I and III:

Mobile products can be on the 2nd / 4th floor.

Therefore, the statements I and III together are not sufficient to answer the question.

Hence, statement II alone is sufficient to answer the question.

From statement III:

Mobile products are neither on the topmost floor nor on the lowermost floor.

Mobile products can be on the 2nd / 3 / 4th floor.

Therefore, statement III alone is not sufficient to answer the question.

Floor	Product
5	~~Mobile Product~~
4	
3	~~Mobile Product~~
2	
1	~~Mobile Product~~

Table : Statement I and III

Scheduling

In this section, data based on months, years or date will be provided and you need to find whether the data given in the statements is sufficient or not.

Directions: In the following question, a given question is followed by information in three statements. You have to decide the data in which statement(s) is sufficient to answer the question and mark your answer accordingly.

Q. Ten persons A, B, C, D, E, F, G, H, I and J have their lecture on seven different days of a week. The week starts on Monday. Not more than two persons have their lecture on same day. At least one person has a lecture on each day. A and G have their lecture on the same day but before the lectures of C and J. C and J have their lectures on different days. Only B has lecture on Tuesday. H has his lecture just before the day on which J has his lecture. Which person(s) have their lecture on Friday?

Statement I: E has lecture on Friday. D and F have their lectures on the same day. There are four persons having their lecture between the day on which D and E have their lecture respectively.

Statement II: H has his lecture just after the day on which E has his lecture. Only J has lecture on Sunday.

Statement III: I has his lecture just before the day on which A has his lecture. I has his lecture before E.

A. 1. A and G have their lecture on the same day but before the lectures of C and J.

2. C and J have their lectures on different days.

3. Only B has lecture on Tuesday.

4. H has his lecture just before the day on which J has his lecture.

Statement I: E has lecture on Friday. D and F have their lectures on the same day. There are four persons having their lecture between the day on which D and E have their lecture respectively

Case: 1	
Day	**Person**
Monday	D, F
Tuesday	B
Wednesday	A, G
Thursday	
Friday	E
Saturday	
Sunday	

Case: 2	
Day	**Person**
Monday	D, F
Tuesday	B
Wednesday	
Thursday	A, G
Friday	E
Saturday	
Sunday	

Tables: Cases of Statement I

Statement II: H has his lecture just after the day on which E has his lecture. Only J has lecture on Sunday.

Day	Person
Monday	
Tuesday	B
Wednesday	I
Thursday	A, G
Friday	
Saturday	
Sunday	

Table: Statement III

Statement I, II and III together:

Therefore, C has his lecture either on Friday or Saturday.
Hence, **data in Statement I, II and III together are not sufficient to answer the question.**

Day	Person
Monday	
Tuesday	B
Wednesday	
Thursday	
Friday	E
Saturday	H
Sunday	J

Table: Statement II

Statement III: I has his lecture just before the day on which A has his lecture. I has his lecture before E.

Day	Person
Monday	D, F
Tuesday	B
Wednesday	I
Thursday	A, G
Friday	E
Saturday	H
Sunday	J

Table: Statement I,II and III