Data sufficiency problems

Introduction to data sufficiency problems

Data sufficiency questions test your knowledge of basic math facts and skills along with reasoning, analytical, and problem-solving abilities. Each data sufficiency item presents you with a question. You do not actually have to find the answer to the problem; instead, your challenge is to decide whether or not the information presented along with the question would be sufficient to allow you to answer the question.

Data sufficiency means you need to check whether the data given in the statements are sufficient to answer the question asked or not. You need to find a unique answer to the question asked. More than one answer is not allowed.

How to answer data sufficiency questions

First of all, you need to read the directions of a particular Data Sufficiency question very carefully as the examiner can change the directions, and even after solving all the questions correctly, you mark the wrong answers.

You need to remember the steps involved in solving a particular Data Sufficiency question and follow them in this particular order:
Check A(first statement)
Then check B(the second statement)
And lastly, if required combine the two statements to get the answer.

Do not make any assumptions while solving Data Sufficiency problems

Example 1: Three packages have a combined weight of 48 pounds. What is the weight of the heaviest package?

A. One package weighs 12 pounds.

B. One package weighs 24 pounds.

1. Statement A alone is sufficient to answer this question, but statement B alone

is not sufficient.

2. Statement B alone is sufficient to answer this question, but statement A alone is not sufficient.

3. Both statements together are needed to answer this question, but neither statement alone is sufficient.

4. Either statement by itself is sufficient to answer this question.

5. Not enough facts are given to answer the question.

Answer: 2) Statement B alone is sufficient to answer this question, but statement A alone is not sufficient.

Solution: Statement A is not sufficient to determine the weight of the heaviest package. It implies only that the combined weight of the other two packages is 36 pounds. (Eliminate options 1 and 4). Statement B alone is sufficient for it implies that the combined weight of two of the packages is only 24 pounds. Since the weight of the 24 -pound packages is equal to the combined weight of the other two packages, the heaviest package must weigh 24 pounds. (Eliminate options 3 and 5). Since statement B alone is sufficient to answer the question but statement A alone is not, answer this question as option 2.

Example 2: How many books are there on a certain shelf?

A. If four books are removed, the number of books remaining on the shelf will be less than 12.

B. If three more books are placed on the shelf, the total number of books on the shelf will be more than 17.

1. Statement A alone is sufficient to answer the question, but statement B alone is not sufficient.

2. Statement B alone is sufficient to answer the question, but statement A alone is not sufficient.

3. Both statements together are needed to answer the question, but neither statement alone is sufficient.

4. Either statement by itself is sufficient to answer the question.

5. Not enough facts are given to answer the question.

Answer: 3. Both statements together are needed to answer the question, but neither statement alone is sufficient.

Solution: Neither statement alone is sufficient to answer the question asked. Statement A alone implies only that the number of books on the shelf is 15 or fewer, and statement B alone implies only that the number of books on the shelf is 15 or more. (Eliminate options 1, 2, and 4). But the two statements taken together are sufficient to answer the question, for they imply that the number of books on the shelf is 15. (15 is the only integer that satisfies both statements A and B). Since neither statement alone is sufficient, but the two statements together are, answer this question as option 3.

Example 3: Directions for data sufficiency questions (3 and 4):

A. If data in statement I alone is sufficient to answer the question.
B. If data in statement II alone is sufficient to answer the question.
C. If data either in statement I alone or statement II alone are sufficient to answer the question.
D. If data given in both I & II together are not sufficient to answer the question.
E. If data in both statements I & II together are necessary to answer the question.

Question 3. Who is taller among P, Q, R, S & T?

I. S is shorter than Q. P is shorter than only T.

II. Q is taller than only S. T is taller than P and R.

Answer: C.

Solution:From I : P is shorter than only T, this means that P is taller than all Q, R & S, so T is tallest.

From II : Q only taller than S, so S is shortest, and Q is second shortest, Now T taller than P and R both, So tallest of all.

Question 4. What is the distance between point P and point Q?

I. Point R is 10 m west of point P and point S is 10 m north of point P.

II. Point Q is 10 m south-east of point R. Point S is 20 m north-west of point Q.

Answer: D)

Solution:From I : No relation between points P and Q

From II : In this since we don't know the angles between sides of triangle forming with

points PQS and PQR, PQ cannot be determined.