

GMAT Prep

Data Insights 2



Data Sufficiency

This data sufficiency problem consists of a question and two statements, labeled (1) and (2), in which certain data are given. You have to decide whether the data given in the statements are sufficient for answering the question. Using the data given in the statements, plus your knowledge of mathematics and everyday facts (such as the number of days in July or the meaning of the word counterclockwise), you must indicate whether:

- A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
- B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
- C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
- D. EACH statement ALONE is sufficient to answer the question asked.
- E. Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed.



Data Sufficiency

1. If the two machines A and B run simultaneously, how many minutes would be required to produce a total of 400 toys?
 - (1) Machine A produces toys at a uniform rate of 90 toys in 15 minutes.
 - (2) Machine B produces toys at a uniform rate of 60 toys in 30 minutes.
 - A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
 - B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
 - C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
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Data Sufficiency

2. Carlotta can drive from her home to her office by one of two possible routes. If she must also return by one of these routes, what is the distance of the shorter route?
- (1) When she drives from her home to her office by the shorter route and returns by the longer route, she drives a total of 42 kilometers.
 - (2) When she drives both ways, from her home to her office and back, by the longer route, she drives a total of 46 kilometers.
- A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
 - B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
 - C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
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Data Sufficiency

3. Two cars, S and T, each traveled a distance of 50 miles. Did car S use more gasoline than car T?
- (1) Cars S and T traveled the entire distance at the rates of 55 miles per hour and 50 miles per hour, respectively.
 - (2) For the entire distance, car S traveled 20 miles per gallon of gasoline and car T traveled 25 miles per gallon of gasoline.
- A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
 - B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
 - C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
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Data Sufficiency

4. On Monday morning a certain machine ran continuously at a uniform rate to fill a production order. At what time did it completely fill the order that morning?
- (1) The machine began filling the order at 9:30 a.m.
- (2) The machine had filled $\frac{1}{2}$ of the order by 10:30 a.m. and $\frac{5}{6}$ to the order by 11:10 a.m.
- A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
- B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
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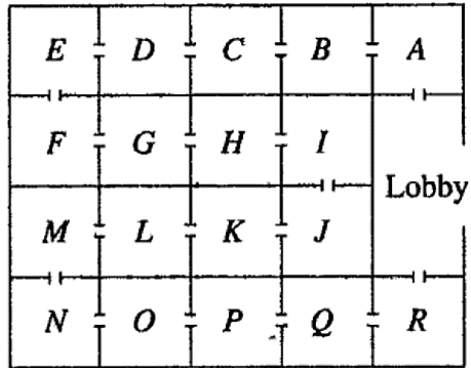
Data Sufficiency

5. Chan and Mieko drove separate cars along the entire length of a certain route. If Chan made the trip in 15 minutes, how many minutes did it take Mieko to make the same trip?
- (1) Mieko's average speed for the trip was $\frac{3}{4}$ of Chan's average speed.
- (2) The route is 14 miles long.
- A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
- B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
- C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
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Data Sufficiency

6.



The figure above represents the floor plan of an art gallery that has a lobby and 18 rooms. If Lisa goes from the lobby into room A at the same time that Paul goes from the lobby into room R, and each goes through all of the rooms in succession, entering by one door and exiting by the other, which room will they be in at the same time?

- (1) Lisa spends $2x$ minutes in each room and Paul spends $3x$ minutes in each room.
- (2) Lisa spends 10 minutes less time in each room than Paul does.

- A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
- B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
- C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
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Data Sufficiency

7. Is $n = 8$?

(1) $n^2 = 8n$

(2) n is even.

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- B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
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Data Sufficiency

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Data Sufficiency

8. Is z an odd integer?

(1) $3z$ is an odd integer.

(2) $\frac{z}{3}$ is an odd integer.

A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.

B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.

C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.

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Data Sufficiency

9. If S is the infinite sequence: $S_1 = 9, S_2 = 99, S_3 = 999, \dots, S_K = 10^K - 1, \dots$, is every term in S divisible by the prime number p ?
- (1) p is greater than 2.
 - (2) At least one term in sequence S is divisible by p .
- A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
- B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
- C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
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Data Sufficiency

10. If digit # is thousandths digit of $A = 7.23\#6$. What is the value of #?

(1) When A is rounded to hundredths digit, the hundredths digit of A is 4

(2) # is a prime number.

A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.

B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.

C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.

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Data Sufficiency

11. If x and y are positive integers, is $x^y + (x^x)(y^y)$ odd?

(1) $x - 2y$ is odd.

(2) $y - 2x$ is odd.

- A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
- B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
- C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
- D. EACH statement ALONE is sufficient to answer the question asked.
- E. Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed.



Data Sufficiency

12. Is n an integer?

(1) $2n$ is an integer.

(2) $5n$ is an integer.

A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.

B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.

C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.

D. EACH statement ALONE is sufficient to answer the question asked.

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Data Sufficiency

13. Integer N lies between 25 and 35, what is the value of N ?

(1) When N is divided by 3, the remainder is 1.

(2) When N is divided by 4, the remainder is 2.

A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.

B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.

C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.

D. EACH statement ALONE is sufficient to answer the question asked.

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Data Sufficiency

14. N is a positive integer. What is the remainder when 2^N is divided by 10?
- (1) N is divisible by 2.
 - (2) N is divisible by 4.
- A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
 - B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
 - C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
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Data Sufficiency

15. Any decimal that has only a finite number of nonzero digits is a terminating decimal. For example, 24, 0.82, and 5.096 are three terminating decimals. If r and s are positive integers and the ratio $\frac{r}{s}$ is expressed as a decimal, is $\frac{r}{s}$ a terminating decimal?
- (1) $90 < r < 100$
(2) $s = 4$
- A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
D. EACH statement ALONE is sufficient to answer the question asked.
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Two Part Analysis

Two-Part Analysis questions present a brief scenario or problem and asks you to select two answer choices related to the data. The answer choices are connected to each other in some way. For example, there might be two steps involved in solving a problem or two components required to complete a task. Your possible answers are presented in a table format with a column for each answer choice. You will mark the best answer for the first part of the question in the first column, and the best answer for the second part in the second column.

- Read the information carefully. It may cover a wide range of content, including quantitative, verbal, or some combination of both. All the material presented is designed to be challenging. Don't let any familiarity with the subject matter influence your response. Only use the data presented in the question.
- Determine exactly what the question is asking. Pay close attention to how the question describes the tasks. Sometimes the response columns headings lack the details that could help you better understand what you are supposed to do.
- Review all available answers before making a final choice. Determine whether your tasks are dependent or independent. Some questions will pose two tasks that can be carried out individually. Others pose one task with two dependent parts.
- Keep in mind that the same answer choice might be the correct response for both columns. It is possible that one answer option satisfies the conditions of both response columns.



Two Part Analysis

16. The Quasi JX is a new car model. Under ideal driving conditions, the Quasi Jx's fuel economy is E kilometers per liter ($E \frac{km}{L}$) when its driving speed is constant at S kilometers per hour ($S \frac{km}{h}$).

In terms of the variables S and E , select the expression that represents the number of liters of fuel used in 1 hour of driving under ideal driving conditions at a constant speed S , and select the expression that represents the number of liters of fuel used in a 60 km drive under ideal driving conditions at a constant speed S . Make only two selections, one in each column.

Liters of fuel in 1 hour	Liters of fuel in 60 km	
<input type="radio"/>	<input type="radio"/>	$\frac{S}{E}$
<input type="radio"/>	<input type="radio"/>	$\frac{E}{S}$
<input type="radio"/>	<input type="radio"/>	$\frac{60}{E}$
<input type="radio"/>	<input type="radio"/>	$\frac{60}{S}$
<input type="radio"/>	<input type="radio"/>	$\frac{S}{60}$
<input type="radio"/>	<input type="radio"/>	$\frac{E}{60}$



Two Part Analysis

17. Two families buy new refrigerators using installment plans. Family A makes an initial payment of \$750. Family B makes an initial payment of \$1200. Both families make five additional payments to pay off the balance. Both families pay the same amount for their refrigerators including all taxes, fees, and finance charges.

In the table below, identify a monthly payment, in dollars, for Family A and a monthly payment, in dollars, for Family B that are consistent with the installment plan described above. Make only one selection in each column.

Family A	Family B	Monthly payment (in dollars)
<input type="radio"/>	<input type="radio"/>	50
<input type="radio"/>	<input type="radio"/>	80
<input type="radio"/>	<input type="radio"/>	120
<input type="radio"/>	<input type="radio"/>	160
<input type="radio"/>	<input type="radio"/>	250
<input type="radio"/>	<input type="radio"/>	300



Two Part Analysis

18. Two water storage tanks, Tank A and Tank B, can each hold more than 20,000 liters of water. Currently, Tank A contains 5,000 litres of water, while Tank B contains 8,000 litres. Each tank is being filled at a constant rate, such that in 15 hours, the two tanks will contain the same amount of water, though neither will be full.

In the table below, identify rates of filling for each tank that are together consistent with the information. Make only one selection in each column.

Tank A Fill Rate	Tank B Fill Rate	
<input type="radio"/>	<input type="radio"/>	30 litres/hr
<input type="radio"/>	<input type="radio"/>	90 litres/hr
<input type="radio"/>	<input type="radio"/>	150 litres/hr
<input type="radio"/>	<input type="radio"/>	220 litres/hr
<input type="radio"/>	<input type="radio"/>	290 litres/hr



Two Part Analysis

19. Over seven years, from 2002 to 2009, the number of babies born to married couples increased despite a decrease in marriages from 17,000 marriages in 2002. B and M represent the percent change in the babies and marriages, respectively. I represents the number of babies per married couple in 2002. The percent change in a quantity is calculated by the formula:

$$\left(\frac{X_{new} - X_{old}}{X_{old}} \right) \times 100$$

In the table below, identify the following with the given information.

- i. The expression that represents the number of babies born in 2002.
- ii. The expression of the number of babies born per family in 2009.

Number of babies born in 2002	Number of babies born per family in 2009	
<input type="radio"/>	<input type="radio"/>	$17000 I$
<input type="radio"/>	<input type="radio"/>	$\frac{17000}{I}$
<input type="radio"/>	<input type="radio"/>	$\left(\frac{100 + B}{100 + M} \right) \times I$
<input type="radio"/>	<input type="radio"/>	$\left(\frac{100 - B}{100 + M} \right) \times I$
<input type="radio"/>	<input type="radio"/>	$\left(\frac{100 + M}{100 + B} \right) \times I$
<input type="radio"/>	<input type="radio"/>	$\left(\frac{100 - M}{100 + B} \right) \times I$



Two Part Analysis

20.

	Brand X	Brand Y
Miles per gallon	40	36
Cost per gallon	\$0.80	\$0.75

The table above gives the gasoline costs and consumption rates for a certain car driven at 50 miles per hour, using each of two brands of gasoline.

In the table below, identify miles driven by \$12 worth of each of Brand X and Brand Y gasoline consistent with the information. Make only one selection in each column.

Brand X	Brand Y	Miles driven (in miles)
<input type="radio"/>	<input type="radio"/>	500
<input type="radio"/>	<input type="radio"/>	576
<input type="radio"/>	<input type="radio"/>	600
<input type="radio"/>	<input type="radio"/>	670
<input type="radio"/>	<input type="radio"/>	700





Thank you