

Data Sufficiency – Easy and Medium

1. What is the value of x ?

(1) $2x = 10$

(2) $x - 3 = 2$

- a) Statement (1) ALONE is sufficient
- b) Statement (2) ALONE is sufficient
- c) Both statements together are sufficient
- d) Each statement ALONE is sufficient

Ans) d

Explanation:

The Statement (1) gives value of $x = 5$, and Statement (2) also gives $x = 5$.

Therefore, each statement ALONE is sufficient to determine x .

2. What is the value of x ?

(1) $x^2 = 49$ and $x > 0$

(2) $x^2 = 49$

- a) Statement (1) ALONE is sufficient
- b) Statement (2) ALONE is sufficient
- c) Both statements together are sufficient
- d) Each statement ALONE is sufficient

Ans) a

Explanation:

Statement (1) gives $x^2 = 49$ and $x > 0$, so $x = 7$.

Statement (2) alone is not sufficient.

Thus, Statement (1) ALONE is sufficient.

3. Is line L perpendicular to line M in the coordinate plane?

(1) Slope of line L is 2, slope of line M is -0.5

(2) Lines L and M intersect at 90°

- a) Statement (1) ALONE is sufficient
- b) Statement (2) ALONE is sufficient
- c) Both statements together are sufficient
- d) Each statement ALONE is sufficient

Ans) c

Explanation:

I: Product of slopes = $2 \times (-0.5) = -1 \Rightarrow$ Perpendicular

II: Direct statement \Rightarrow Also sufficient

4. What is the value of c ?

(1) $c^2 = 49$

(2) $c + 7 = 14$

- a) Statement (1) ALONE is sufficient
- b) Statement (2) ALONE is sufficient
- c) Both statements together are sufficient
- d) Each statement ALONE is sufficient

Ans) b

Explanation:

Statement (1): $c^2 = 49$ is not sufficient since c could be 7 or -7.

Statement (2): $c + 7 = 14$ gives $c = 7$, which is sufficient.

5. A team of researchers is trying to understand the factors influencing employee morale at a large organization. They want to know if a recent change in work-from-home policy has had a positive impact.

(1) A company-wide survey conducted before the policy change showed that 60% of employees reported feeling "satisfied" or "very satisfied" with their work environment.

(2) An anonymous feedback mechanism implemented after the policy change received a significant number of comments praising the increased flexibility.

- a) Statement (1) ALONE is sufficient
- b) Statement (2) ALONE is sufficient
- c) Both statements together are sufficient
- d) Each statement ALONE is sufficient

Ans) c

Explanation:

Statement I provides baseline satisfaction before the policy change, but doesn't tell us about the morale after.

Statement II indicates positive feedback, but it's anonymous and doesn't quantify the impact on overall morale or compare it to the pre-change levels.

Without a direct comparison or quantifiable data on overall morale post-change, we cannot definitively say if the policy had a positive impact.

6. Do all members of a team know Java?

- (1) Every team member passed the Java certification.**
- (2) If a person knows Java, they pass the certification.**
 - a) Statement (1) ALONE is sufficient**
 - b) Statement (2) ALONE is sufficient**
 - c) Both statements together are sufficient**
 - d) Each statement ALONE is sufficient**

Ans) c

Explanation:

I: All passed \Rightarrow But does passing imply knowledge?

II: Pass \Leftarrow knows \Rightarrow Need both to conclude

Combined: Together, yes \Rightarrow Passing \Rightarrow knows \Rightarrow All know Java

7. Which of the following is sufficient to determine if the new route optimization software has reduced the average delivery time?

- (1) The new software is projected to reduce the total distance travelled by delivery vehicles by 15%.**
- (2) Data from a pilot program using the software on a limited number of routes showed an average reduction of 10 minutes per delivery.**
 - a) Statement (1) ALONE is sufficient**
 - b) Statement (2) ALONE is sufficient**
 - c) Both statements together are sufficient**
 - d) Each statement ALONE is sufficient**

Ans) b

Explanation:

Statement I suggests a potential for reduced travel distance, which *could* lead to reduced time, but doesn't guarantee it (e.g., if traffic conditions worsen).

Statement II directly states the average reduction in delivery time observed in a pilot program. This direct evidence is sufficient to answer the question, assuming the pilot program is representative.

8. Which of the following is sufficient to determine if students who participated in the program showed significant improvement in their test scores?

- (1) The average score of all students in mathematics increased by 5% after the tutoring program was introduced.**
- (2) Students who attended at least 80% of the tutoring sessions showed an average improvement of 12% in their mathematics test scores.**
- a) Statement (1) ALONE is sufficient**
- b) Statement (2) ALONE is sufficient**
- c) Both statements together are sufficient**
- d) Each statement ALONE is sufficient**

Ans) b

Explanation:

Statement I shows an overall increase in the average score, but this could be due to other factors and doesn't isolate the impact of the tutoring program on participants.

Statement II specifically focuses on the improvement of students who actively participated in the program, providing direct evidence of its effectiveness for that group.

9. Can a project be completed in under 12 days?

(1) A and B together complete the project in 10 days.

(2) A does half the work in 5 days.

- a) Statement (1) ALONE is sufficient**
- b) Statement (2) ALONE is sufficient**
- c) Both statements together are sufficient**
- d) Each statement ALONE is sufficient**

Ans) a

Explanation:

I: 10 days \Rightarrow Yes — Sufficient

II: If A does $\frac{1}{2}$ in 5 days \Rightarrow full in 10 \Rightarrow Still not enough unless we know about B \Rightarrow Not sufficient

10. Can A, B, and C together finish a project in fewer than 6 days?

(1) A and B together can finish the project in 8 days, and C alone can finish it in 24 days.

(2) B and C together can finish the project in 6 days, and A works at the same rate as B.

- a) Statement (1) ALONE is sufficient**
- b) Statement (2) ALONE is sufficient**
- c) Both statements together are sufficient**
- d) Each statement ALONE is sufficient**

Ans) c

Explanation:

Statement I: Tells us work rates of A+B and C individually, but not enough to get B or A separately → can't combine all three → **Not sufficient.**

Statement II: Gives B+C rate, and $A = B$, but without A+B or C alone, can't compute total → **Not sufficient.**

Together: We can deduce individual rates of A, B, and C → add to get full rate → determine if <6 days → **Sufficient.**

11. How many students play both cricket and football in a class of 50?

(1) 30 play cricket, 35 play football.

(2) 10 students play neither.

a) Statement (1) ALONE is sufficient

b) Statement (2) ALONE is sufficient

c) Both statements together are sufficient

d) Each statement ALONE is sufficient

Ans) c

Explanation:

From I & II: Total = 50;

so, 40 play either $\Rightarrow \text{Cricket} \cap \text{Football} = 30 + 35 - 40 = 25$

Therefore, together needed.

12. Is March 1st, 2024 a Friday?

(1) February 1st, 2024 is a Thursday.

(2) 2024 is a leap year.

a) Statement (1) ALONE is sufficient

- b) Statement (2) ALONE is sufficient
- c) Both statements together are sufficient
- d) Each statement ALONE is sufficient

Ans) c

Explanation:

Statement I: Knowing February 1st is Thursday is helpful, but leap year affects the number of days in February → need more info → Not sufficient.

Statement II: Tells us February has 29 days, but without knowing which weekday the month starts on, it's not enough.

Together: 29 days after Feb 1st → March 1st is a Friday → Sufficient together.

13. What is the value of the three-digit number N?

- (1) The digits of N are in arithmetic progression, and the sum of digits is 18.
 - (2) Reversing the digits of N gives a number 198 less than N.
- a) Statement (1) ALONE is sufficient
 - b) Statement (2) ALONE is sufficient
 - c) Both statements together are sufficient
 - d) Each statement ALONE is sufficient

Ans) c

Explanation:

I: Many three-digit numbers satisfy both conditions — not unique.

II: Reverse-digit condition gives a narrow equation. Combine with digit sum = 18 and AP constraint — solvable uniquely.