



GMAT Sample Paper

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GMAT Quantitative Reasoning

1. Consider a function f satisfying $f(x * y) = f(x) + f(y)$ where x, y are positive integers, then what is the value of $\frac{f(3) + f(12)}{f(12) - f(4) + f(2)}$?
- A 2
B 6
C 3
D 8
E 4
2. A merchant sold a car at 60% of the marked price and obtained a loss of 20%. If the cost price of the car is three times the cost price of the bike, then what should be the selling price of the bike to make a profit of 20%?
- A 120% of the Marked Price of the car
B 20% of the Marked Price of the car
C 30% of the Marked Price of the car
D 80% of the Marked Price of the car
E 50% of the Marked Price of the car
3. Two trains, P and Q, pass a pole in 40 seconds and 2 minutes 20 seconds, respectively. If the length of train P is two-thirds that of train Q, what is the ratio of the speed of train P to that of train Q?
- A 9:4
B 5:2
C 7:3
D 12:5
E 14:3
4. If a and b are positive integers satisfying $4a + 3b = 17$ and $\frac{(5ab)!}{3^p}$ is an integer, then the maximum value of p is
- A 13
B 14
C 15

- D** 16
- E** 17
5. Alex has two children - Ben and Chloe. The current age of Alex is 4 times that of Ben. 4 years later, the age of Alex is 4 times that of Chloe. What is the age difference between Ben and Chloe?
- A** 2
- B** 3
- C** 4
- D** 5
- E** 6
6. In a college there are 150 students out of which 60% of the students play cricket, 30% of the students play football and 40% of the students play hockey. If it is known that no student plays all three sports and all the students play at least one sport, then what is the number of students that play exactly one sport?
- A** 45
- B** 65
- C** 105
- D** 85
- E** 75
7. A beaker contains a solution in which the concentration of milk is 80%. On the addition of some water, this ratio of milk to water becomes 8:5. On replacing 39 L of this solution with pure milk, the ratio of milk to water changes to 9:4. What is the volume of water added initially?
- A** 30 litres
- B** 45 litres
- C** 50 litres
- D** 35 litres
- E** 60 litres
8. In a class of 150 students, the average weight is 42 kg. If the number of girls increases by 50% and the number of boys becomes two-thirds of its original value, while keeping the total number of students the same, the new average weight of the class becomes 43 kg. It is also observed that the average weight of boys and girls remains the same as before. Find the sum of the average weights of boys and girls.
- A** 80
- B** 75

- C 85
- D 90
- E 95
9. An unfair dice consisted of two faces with 1 on them, two faces with 2 on them, and one face each of 3 and 5 on them. If the dice is rolled thrice, then what is the probability that the sum of the three rolls is greater than or equal to 11?
- A $\frac{21}{216}$
- B $\frac{19}{216}$
- C $\frac{17}{216}$
- D $\frac{8}{216}$
- E $\frac{7}{216}$
10. Let a_n and b_n be two sequences such that $a_n = 13 + 6(n-1)$ and $b_n = 15 + 7(n-1)$ for all natural numbers n . Then, the sum of all the three-digit numbers that are common in both series is
- A 11487
- B 11987
- C 11687
- D 11615
- E 11944
11. Find the remainder when $2^{88} \times 5^{41}$ is divided by 7.
- A 1
- B 2
- C 3
- D 5
- E 6
12. Nihal took a ₹1,00,000 loan at 15% interest per year. If he repays in two equal yearly instalments, the amount per instalment is ₹x. If he repays in three equal yearly instalments, the amount per instalment is ₹y. What is the approximate difference between ₹x and ₹y?
- A 16925

- B** 15834
- C** 17714
- D** 17981
- E** 19815
13. $y(x) = mx + c$ represents a linear relation in y and x . If $y(-1) = 3$ and $y(3) = 11$, find the value of $y(y(2))$
- A** 9
- B** 23
- C** 62
- D** 12
- E** 45
14. The value of the expression $\frac{81^3 + 28^3 - 109^3}{86^2 - 23^2}$ is?
- A** 110
- B** -108
- C** 3428
- D** -34
- E** 8192
15. What is the highest power of 12 in $99!$?
- A** 96
- B** 95
- C** 48
- D** 47
- E** 8
16. Peter takes 4 hours longer than Samuel to prepare 30 sandwiches. Working together, they can make 50 sandwiches in 150 minutes. How long would it take Peter alone to make 40 sandwiches?
- A** 6 hours
- B** 8 hours
- C** 10 hours
- D** 12 hours

E 5 hours

- 17.** The sum of two numbers is 16. Thrice the smaller number is greater than twice the larger by 3. The product of the numbers is ?

A 35
B 45
C 63
D 55
E 62

- 18.** What is the remainder when 43^{380} is divided by 20?

A 5
B 2
C 4
D 1
E 8

- 19.** If $2x^2 + 10 = 7y - 5x$ and $4y^2 - 5y = -(7x + 17)$, then find the value of $(x + y)$?

A $\frac{3}{2}$
B $\frac{5}{2}$
C $-\frac{3}{2}$
D $-\frac{5}{2}$
E $\frac{7}{2}$

- 20.** Find the value of $\sqrt{11 + \sqrt{72}} + \sqrt{11 - \sqrt{72}}$

A 9
B $2\sqrt{2}$
C 22
D 61
E 6

21. Find the possible number of integral values of x satisfying $2x^2 + 11x - 138 < 0$

- A 16
- B 18
- C 17
- D 30
- E 22

GMAT Data Insights

22. Raju, a cake seller, mixes flour, cream, and sugar in a ratio of 5:3:2 and sells it at the cost price. Their prices are in the ratio 4:10:5. What ratio should the three be mixed in to get a 10% profit selling at the earlier proportions' price?

i) The proportion of sugar should remain the same.

ii) The price of sugar is Rs. 30 per kg

- A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
- B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
- C BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
- D EACH statement ALONE is sufficient.
- E Statements (1) and (2) TOGETHER are NOT sufficient.

23. In a meeting held by ACS, there were 10 attendees. If N attendees are selected to deliver speeches during the meeting, and it is given that N is a positive integer, what is the value of N ?

Statement 1: N is a multiple of 3.

Statement 2: There are 210 ways to select the N attendees to deliver speeches.

- A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
- B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
- C BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
- D EACH statement ALONE is sufficient.
- E Statements (1) and (2) TOGETHER are NOT sufficient.

24. The table above shows the number of independent bookstores in various cities.

For each of the following statements, select True if the statement can be verified as true based on the information provi...

[View Full Question](#)

25. The distance between Town X and Town Y is 150 miles. Car A leaves Town X for Town Y, and sometime later, Car B leaves Town Y for Town X. If the two cars meet exactly halfway between Town X and Town Y, what is the speed of Car B?

- (1) Car B leaves Town Y exactly 45 minutes after Car A leaves Town X.
(2) Car B travels at a speed 10 mph faster than Car A.

- A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
C BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
D EACH statement ALONE is sufficient.
E Statements (1) and (2) TOGETHER are NOT sufficient.

26. If $7x = 4y = 9z$, what is the value of $9x - 5y + 4z$?

Statement 1: $3x - y = \frac{5}{14}$

Statement 2: $5y + 2z = \frac{53}{18}$

- A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
C BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
D EACH statement ALONE is sufficient.
E Statements (1) and (2) TOGETHER are NOT sufficient.

27. A historical research archive is curating three new collections of ancient manuscripts. Each collection will contain four manuscripts: two from classical antiquity and two from the medieval period. M...

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28. After a fundraiser, the event organisers surveyed all the participants who attended about how many different types of sweets they had during the party. The attendants could have taken any number of s...

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29. A fruit seller sold 4 kg of oranges at Rs. 120 and incurred a loss of 25%. So, he decided to mark up the price of the remaining fruits. He made a total revenue of Rs. 1000 and an overall profit of 25...

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30. A company placed orders with Suppliers A and B, buying at least eight units from each. Supplier A's pricing: A fixed fee of \$120, with the first eight units at \$25 each, and \$7 for every additional u...

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31. A team of 5 must be selected from 4 men and 4 women. At least 2 men and 2 women must be

included. X is the total number of valid teams possible if A and B (both women) refuse to work together. Y is t...

[View Full Question](#)

32. S is a set of consecutive numbers. What is the size of the set?

i) There are two multiples of 5 in the set.

ii) There are seven multiples of 2 in the set.

A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.

B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.

C EACH statement ALONE is sufficient.

D BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.

E Statements (1) and (2) TOGETHER are NOT sufficient.

33. A retail petrol seller mixes petrol that costs him Rs. 70 per litre with kerosene and sells the mixture at Rs. 77 per litre. What is his profit percentage?

i) He brought 10 litres of kerosene at 60 per litre.

ii) The total profit earned is Rs. 240.

A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.

B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.

C BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.

D EACH statement ALONE is sufficient.

E Statements (1) and (2) TOGETHER are NOT sufficient.

34. The chart below displays the total number of online queries received by the tech company Citrus and the percentage of these queries resolved each day from Monday to Friday.



Use the drop-down menus t...

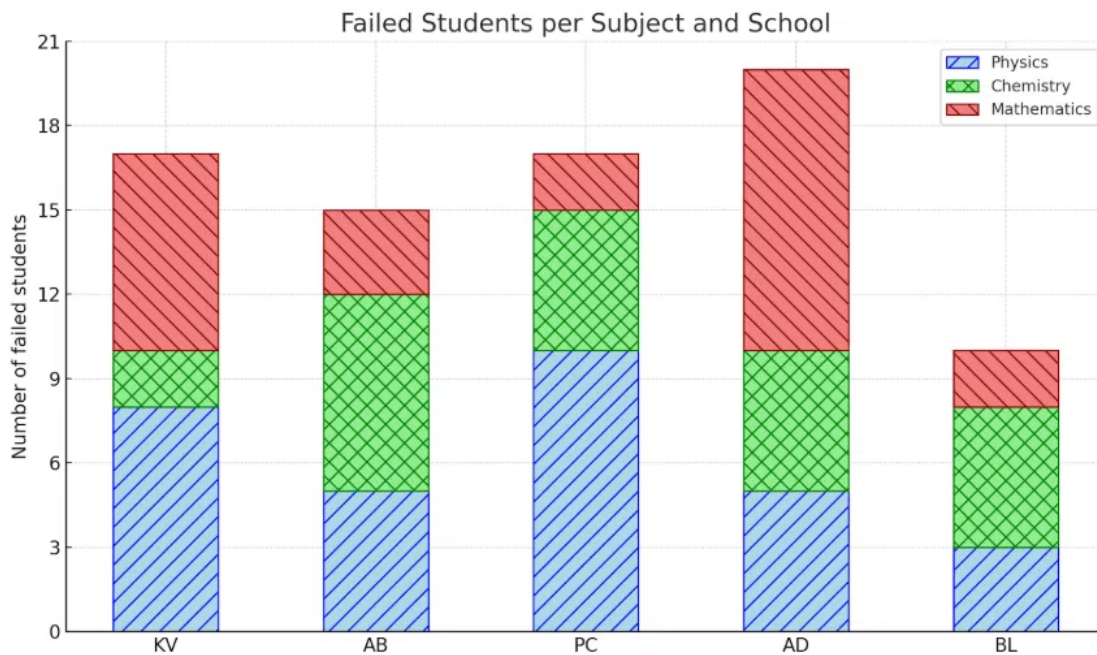
[View Full Question](#)

35. For each of the following statements, select Yes if the statement can be shown to be true based on the information in the table. Otherwise, select No.

[columns: Yes, No]

[View Full Question](#)

36. The table below shows the statistics of five senior secondary schools about the number of students who failed in the subjects: Physics, Chemistry, and Mathematics.



Among the given schools, the schoo...

[View Full Question](#)

37. Neha is organising a weekend workshop and needs to print 200 brochures. She is considering two printing services: a nearby print shop and an online printing service. At the nearby print shop, each b...

[View Full Question](#)

38. For each of the following statements, select Yes if the statement accurately reflects the information given in the tabs. Otherwise, select No.

[columns: Yes, No]

[View Full Question](#)

39. For each of the following statements, select Yes if the statement accurately reflects the information given in the tabs. Otherwise, select No.

[columns: Yes, No]

[View Full Question](#)

40. For each of the following statements, select Yes if the statement accurately reflects the information given in the tabs. Otherwise, select No.

[columns: Yes, No]

[View Full Question](#)

41. A shopkeeper mixes rice of two types costing ₹x and ₹y per kg in the ratio 10:7, respectively. He sells the resulting mixture at ₹210 per kg making a profit of 19 percent. What is the price (per kg) of the cheaper rice?

Statement 1: The price of the expensive rice is ₹200 per kg.

Statement 2: The mean cost of both the type of rice is ₹180 per kg

- A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
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GMAT Verbal Reasoning

42. Nadia: Leaders in tech companies should have some background in software development. That kind of experience helps them understand the practical challenges their teams face and leads to better decision-making.

Omar: But just having a software background doesn't mean someone will be a good leader. Many engineers struggle with communication and team management.

Which one of the following most accurately describes a flaw in Omar's reasoning?

- A He assumes that engineers cannot develop leadership skills over time.
 - B He criticizes a more extreme version of Nadia's position than she actually states.
 - C He confuses technical skill with leadership potential.
 - D He fails to consider whether all tech leaders need the same qualifications.
 - E He presumes that decision-making and communication skills are unrelated.
43. During a year-long cybersecurity breach, about 1,000 remote employees at Firm Z reported their accounts had been compromised. Around the same number of on-site employees also reported compromised accounts. Based on these figures, it can be hypothesized that working remotely was no more vulnerable to security breaches than working on-site.

Which of the following, if it could be carried out, would be most useful in an evaluation of the above hypothesis?

- A Determining whether remote employees use more personal devices than on-site employees when accessing company systems
- B Comparing the proportion of compromised accounts among remote employees to the proportion among on-site employees
- C Investigating whether some of the compromised accounts involved employees who switched between remote and on-site work during the breach
- D Analyzing the types of data accessed by compromised remote accounts compared to

those accessed by compromised on-site accounts

- E** Determining whether other companies experienced more breaches among remote employees than among on-site employees during the same period

44. The primary objective in the passage is to:

- A** critique governments for prioritising electoral gains over societal welfare by detailing reasons behind fiscal mismanagement.
- B** analyse how structural and psychological factors inherent to governance amplify present bias, undermining long-term policy success.
- C** argue that individual cognitive biases in leaders and political groups are the root cause of systemic governmental short-term focus.
- D** contrast the decision-making processes of individuals with those of governments to highlight how present bias impacts democratic systems.
- E** propose institutional reforms to mitigate the risks of present bias in governance, which has led to election-focused policymaking.

45. The author implies which of the following about the comparison between individual and governmental present bias?

- A** Governments, unlike individuals, are not shielded from short-term concerns due to institutional gaps.
- B** Present bias in governments is primarily rooted in political rather than economic pressures.
- C** Like individuals, governments may neglect long-term interests due to uncertainty and lack of immediate payoff.
- D** Governmental present bias results in more significant societal harm than individual present bias.
- E** The absence of structural continuity in governments ensures their decisions do not consistently benefit future administrations.

46. A government enacts a far-reaching environmental reform with delayed benefits and high upfront costs. According to the passage, this scenario would most likely occur if:

- A** The reform offers voters immediate tax incentives that mask its long-term costs.
- B** The opposition party forces the reform to pass during a political stalemate.
- C** The reform is framed as a symbolic gesture with no tangible enforcement mechanisms.
- D** The current administration is likely confident of long-term political dominance.
- E** A global coalition mandates reform, overriding national legislative decision-making.

47. A regional airline plans to replace complimentary meals on short flights with meals for purchase. **Critics argue that eliminating free meals will lead to a decline in customer satisfaction.** This concern is supported by recent surveys. Nevertheless, implementing the change is unlikely to reduce overall satisfaction. **The airline also plans to lower ticket prices, and this is likely to attract more price-sensitive travelers who are less concerned about free meals and more focused on overall affordability.**

In the argument above, the two boldfaced portions play which of the following roles?

- A The first is an objection that has been raised against a certain plan; the second is a prediction that, if accurate, undermines the force of that objection.
 - B The first is a forecast about how consumers will respond to a proposed change; the second is a counterexample offered to challenge that forecast.
 - C The first is a hypothesis that the argument seeks to test; the second is evidence presented to support that hypothesis.
 - D The first is a consideration that weighs against a proposed policy; the second is a prediction that strengthens the case for adopting the policy.
 - E The first is an assumption that the argument later rejects; the second is an alternative explanation that supports that rejection.
48. The author implies which of the following about the impact of social media on emotional well-being?
- A Its global reach exempts it from being a uniquely American psychological threat.
 - B Its influence is significant but insufficient to explain current American despair.
 - C Its role in influencing rude behaviour extends beyond its immediate users.
 - D It has replaced traditional American institutions that once fostered moral behaviour.
 - E It does not necessarily contribute to depression and rudeness in America.
49. The anecdote of the restaurant owner in the passage most likely serves to:
- A illustrate how societal pressures have transformed customer expectations and behaviour.
 - B highlight a unique trend in the hospitality sector that reflects broader social dynamics.
 - C function as evidence that community spaces are no longer regulated by cultural standards.
 - D reveal that consumer-facing roles are the first victims of the rise in hatred and despair among the populace.
 - E exemplify the growing disconnect between consumer behaviour and institutional norms of conduct.
50. Which of the following, if true, would most directly challenge the author's argument about the root cause of societal crisis?
- A Regions with revitalised workplace ethics programs show no improvement in political polarisation or suicide rates.
 - B Some individuals who report strong familial moral instruction still engage in occasional

online hostility and selfish behaviour.

- C** Nations with robust community organisations but high inequality exhibit similar rates of despair and rudeness.
 - D** Deaths tied to despair correlate more strongly with stagnant wages than with declines in religious affiliation.
 - E** Social media platforms that ban anonymous hateful postings see increased user kindness but unchanged depression metrics.
- 51.** The discussion on “moral formation” most closely suggests which of the following about the nature of the current societal crisis?
- A** It is an inevitable consequence of modernisation and the decline of traditional norms in all globalised societies.
 - B** It cannot be ascribed to external pressures such as economic insecurity and demographic change overwhelming social institutions.
 - C** It is chiefly a social problem that manifests as emotional and relational dysfunction.
 - D** It is fundamentally a failure of character development and interpersonal responsibility rather than solely structural or economic problems.
 - E** It stems primarily from the increasing irrelevance of institutions as a unifying moral force in society.
- 52.** Which of the following is most strongly supported by the discovery of southwest British tin in shipwrecks near Israel (1300 BC) and France (600 BC)?
- A** Mediterranean societies exclusively relied on British tin after 1300 BC.
 - B** Long-distance tin trade networks persisted for centuries.
 - C** French traders replaced Mediterranean merchants as intermediaries by 600 BC.
 - D** Tin from Cornwall was of higher quality than central Asian alternatives.
 - E** The sourcing of tin shifted considerably after 1300 BC.
- 53.** The argument that southwest Britain was a major contributor to Bronze Age tin supplies depends on which of the following assumptions?
- A** The presence of British tin in a few shipwrecks implies regular and large-scale export activity.
 - B** Mediterranean civilisations lacked their own local sources of tin during the Bronze Age.
 - C** Trade between Britain and the Mediterranean must have been bilateral and continuous over centuries.
 - D** The shipwrecks discovered to date are representative of the broader patterns of Bronze Age maritime trade.
 - E** All tin used in Bronze Age Europe and the Mediterranean was transported by sea rather than overland routes.

54. The boldfaced sentence plays which of the following roles in the passage?
- A It introduces a counterargument that the author later refutes using historical evidence.
 - B It outlines a widely held belief that is later disproven through archaeological evidence.
 - C It presents a long-standing scholarly uncertainty that the author addresses through new scientific findings.
 - D It emphasises the geographic distance between Britain and the eastern Mediterranean.
 - E It contrasts with the claim that copper was more readily available than tin in ancient Europe.
55. The core limitation with the last line of the passage is that it:
- A assumes that all ancient societies required identical proportions of tin and copper in their bronze alloys.
 - B relies on the assumption that corrosion has not significantly affected the geochemical analysis of ancient tin ingots.
 - C underestimates the possibility that ancient societies may have substituted other materials for tin when necessary.
 - D presumes, without sufficient evidence, that no other tin sources besides those mentioned could have met the demand.
 - E confuses the presence of rich tin deposits with the certainty that those deposits were actively mined and exported at scale.
56. A study of professional chess players revealed that those who began formal coaching before the age of 10 were far more likely to become grandmasters than those who began coaching at an older age or not at all. Researchers concluded that early coaching significantly increases the likelihood of attaining elite status in chess. However, this conclusion is not entirely correct. Early achievers are typically individuals who show exceptional interest and aptitude for chess from a young age. It is this early talent and motivation—not the timing of coaching—that primarily accounts for their success.
- Which one of the following, if true, most strengthens the objection to the researchers' conclusion?
- A Players who began formal coaching after age 10 but practiced intensely often matched the performance of early-trained players in national tournaments.
 - B Players who started coaching early tended to practice for more hours each week than those who started later.
 - C Parents are much more likely to seek out formal chess coaching for their children if they observe early signs of exceptional aptitude in the game.
 - D Many grandmasters who began early coaching also had access to high-quality instructors and resources.
 - E Players who did not receive coaching but started playing young rarely became grandmasters.
57. For many years, biologists thought a certain frog species had gone extinct in a region because no individuals were found after a fungal outbreak. This belief was based on surveys

conducted after the outbreak, which failed to detect any frogs. However, researchers recently found the species' remains buried in soil layers that appear to have been deposited after the time of the outbreak, suggesting the species might have survived longer than previously believed. This finding does not necessarily disprove the original belief, because _____.

- A** earlier surveys did not cover some of the more remote wetlands in the region
- B** other frog species in the area recovered quickly after the outbreak subsided
- C** sediment layers can contain remains of animals that died years before the layers were deposited
- D** the frog species is known to have a patchy and irregular distribution even in stable environments
- E** DNA from the fungus was also found in the same sediment layers as the frog remains

- 58.** The prestigious Larchmont High School recently introduced a new magnet program for advanced STEM students. Over the past few months, the school has seen a sharp rise in enrollment, and several teachers have noted that classroom resources are becoming stretched. They argue that if the magnet program were relocated to a separate campus, both the STEM students and the general student body would have a better educational experience.

Which of the following is an assumption that supports drawing the conclusion above from the reasons given for that conclusion?

- A** The STEM students would prefer the focused environment of a separate campus.
- B** Students do not enrol in the general program as extensively as those in the magnet program.
- C** Students are frustrated with the limited access to school resources.
- D** Other local schools have begun to offer similar STEM programs.
- E** The increase in enrollment is primarily due to the introduction of the STEM magnet program.

- 59.** Principle: An investment strategy is prudent only if it does not expose the investor to an unacceptable level of financial risk.

Application: Noah has recently begun using a strategy that includes investing in early-stage tech startups. Although the strategy diversifies his portfolio, it increases his exposure to assets that are less stable than traditional blue-chip stocks. Therefore, his strategy is not prudent.

The application of the principle is most vulnerable to criticism on which one of the following grounds?

- A** It overlooks the possibility that diversification may help manage financial risk, even if the assets are individually volatile.
- B** It takes for granted that any increase in exposure to less stable assets results in an unacceptable level of risk.
- C** It assumes that traditional investments are always less risky than alternatives.
- D** It fails to consider that some early-stage startups can provide exceptionally high returns.

E It confuses the potential for loss with a guaranteed outcome of loss.

- 60.** In 2018, a medium-sized company implemented a remote work policy allowing employees to work from home two days a week. A study before the policy was introduced showed average employee productivity scores. A follow-up study conducted two years later showed that productivity among employees had increased by 25%. The company concluded that remote work boosts employee productivity. Meanwhile, a separate study of two similar companies that had allowed remote work for over a decade showed no significant change in productivity during the same two-year period.

The results of the final study mentioned above:

- A** indirectly supports the conclusion that remote work policies could enhance productivity at least in the short term.
 - B** prove that factors aside from remote work might explain the productivity increase observed in the first company.
 - C** reveal that employees at different companies may react differently to remote work arrangements.
 - D** show that the effects of remote work on productivity do not differ significantly between short-term and long-term implementations.
 - E** contradict the conclusion reached by the first company's study.
- 61.** Astronomer: In 2022, Observatory Z discovered 12 comets within a two-month span, an unusually high figure compared to their typical average of 3-4 comet discoveries per year. Strikingly, most of these 12 comets were discovered using a decade-old telescope, while a recently acquired state-of-the-art telescope, capable of scanning larger portions of the sky and detecting fainter objects, identified only one comet in the same period. This discrepancy is puzzling, given that the new telescope was designed to vastly outperform the older model.

Which of the following, if true, most helps to explain the discrepancy described by the astronomer?

- A** The new telescope requires longer exposure times to gather detailed data, limiting the number of observations it can make in a given period.
 - B** Observatory Z invested heavily in training staff to operate the new telescope, leaving less funding for additional research staff during 2022.
 - C** The older telescope was positioned in a region of the sky where comet activity happened to be unusually high during the observation period.
 - D** Comets detected by the new telescope tend to be smaller and less visible than those detected by the older telescope, which focuses on brighter objects.
 - E** Observatory Z prioritized public outreach efforts in 2022, devoting significant time to showcasing comet discoveries made using the older telescope.
- 62.** According to the passage, which of the following would apply to a person who reads a novel and later watches its film adaptation?
- A** The person will recall more perceptual details from the novel than from the film adaptation.
 - B** The film adaptation alone would have been less effective in reinforcing the person's self-image.

- C** The novel's imagined scenes will be more resistant to distortion over time.
 - D** Both experiences will contribute equally to the person's autobiographical memory bank.
 - E** The film adaptation will create a stronger memory for sensory details due to direct perceptual input.
- 63.** Which of the following, if true, would most strengthen the argument that fictional memories can influence decision-making similarly to autobiographical memories?
- A** Fictional narratives frequently contain moral lessons that align with widely held cultural values.
 - B** Individuals who read fiction make decisions more slowly than those who do not.
 - C** People often recall fictional events to explain or justify real-world choices.
 - D** Emotional attachment to fictional characters correlates with vivid dreaming.
 - E** Viewers of movies retain visual details more accurately than readers recall imagined scenes.
- 64.** If a person identifies strongly with a fictional character who overcomes social anxiety, what would the author likely argue about this identification?
- A** The individual has likely experienced similar events in reality and is reliving them through fiction.
 - B** This identification helps validate an aspirational self-image and may influence future behaviour.
 - C** The character's story would not influence the individual unless it contains vivid perceptual details.
 - D** Fictional identification replaces the need for autobiographical memory in shaping identity.
 - E** Strong emotional connections to fiction hinder the ability to rely on real-world memories.

Answers

GMAT Quantitative Reasoning

1. A	2. C	3. C	4. B	5. B	6. C	7. B	8. C
9. B	10. A	11. E	12. C	13. B	14. B	15. D	16. B
17. C	18. D	19. C	20. E	21. C			

GMAT Data Insights

22. A	23. C	24. _	25. C	26. D	27. _	28. _	29. _
30. _	31. _	32. E	33. C	34. _	35. _	36. _	37. _
38. _	39. _	40. _	41. B				

GMAT Verbal Reasoning

42. B	43. B	44. B	45. C	46. D	47. A	48. B	49. E
50. C	51. D	52. B	53. A	54. C	55. D	56. C	57. C
58. E	59. B	60. A	61. C	62. E	63. C	64. B	

Explanations

GMAT Quantitative Reasoning

1. A

The function that satisfies the equation $f(x * y) = f(x) + f(y)$ will be of the form $\log_k x$.

The value of $\frac{f(3) + f(12)}{f(12) - f(4) + f(2)}$ can be as,

$$\frac{f(3) + f(12)}{f(12) - f(4) + f(2)} = \frac{\log_k 3 + \log_k 12}{\log_k 12 - \log_k 4 + \log_k 2} = \frac{\log_k 36}{\log_k 6} = \log_6 36 = 2$$

Hence, the correct answer is option A.

2. C

Selling price of the car (SP) = 60% of the MP of the car = $\frac{3MP}{5}$ ---(1)

For the car,

$$\frac{CP - SP}{CP} \times 100 = 20$$

$$CP - SP = \frac{CP}{5}$$

$$SP = \frac{4CP}{5} \text{ ---(2)}$$

For the bike,

$$\frac{SP' - CP'}{CP'} \times 100 = 20$$

$$SP' - CP' = \frac{CP'}{5}$$

$$SP' = \frac{6CP'}{5} \text{ ---(3)}$$

We are given that $CP = 3CP'$ ---(4)

Substituting (4) in (3), we get,

$$SP' = \frac{2CP}{5} \text{ ---(5)}$$

Substituting (5) in (2), we get,

$$SP = 2 \times \frac{2CP}{5} = 2SP' \text{ ---(6)}$$

Substituting (6) in (1), we get,

$$2SP' = \frac{3MP}{5}$$

$$SP' = \frac{3MP}{10} = \frac{3}{10} \times 100\% MP = 30\% \text{ of } MP$$

So, the bike must be sold at 30% of the marked price of the car.

Hence, the correct answer is option C.

3. C

Train P crosses the pole in 40 seconds.

Train Q crosses the pole in 2 minutes 20 seconds = 140 seconds.

It is given that the length of train P is two-thirds that of train Q.

Let the length of the train Q = 3L

Length of train P = two-thirds of the length of train Q. = $3L \times \frac{2}{3} = 2L$

Speed of train P, $S_p = 2L/40$

Speed of train Q, $S_q = 3L/140$

Therefore, the ratio of the speed of train P to that of train Q

7:3

4. B

We are given a and b are positive integers, and $4a+3b=17$.

The only possible solution for this equation in positive domain is $(a,b)=(2,3)$

So, $5ab=5 \cdot 2 \cdot 3=30$

Now, we are to determine the highest power of 3 in $30!$, which is given as

$$\left[\frac{30}{3} \right] + \left[\frac{30}{3^2} \right] + \left[\frac{30}{3^3} \right] = \left[\frac{30}{3} \right] + \left[\frac{30}{9} \right] + \left[\frac{30}{27} \right] = 10 + 3 + 1 = 14$$

The correct answer is option (B)

5. B

Let the Alex's age be A, Ben's age be B, and Chloe's age be C.

Alex's current age is 4 times Ben's age.

$$\Rightarrow A = 4B \rightarrow 1$$

Four years later, Alex's age is 4 times Chloe's age.

$$\Rightarrow A + 4 = 4(C + 4)$$

$$\Rightarrow A = 4C + 12$$

Replacing the value of A from Eq. 1 -

$$\Rightarrow 4B = 4C + 12$$

$$\Rightarrow 4(B - C) = 12$$

$$\Rightarrow B - C = 3$$

6. C

Let a be the number of students who play just one sport, b be 2 sports, and c be the number of students who play all the sports. We are given that the value of c is 0.

We are given that the value of $a + b + c = 150$ and $a + 2b + 3c = (60 + 30 + 40)\%$ of $150 = 195$

$$a + b = 150$$

$$a + 2b = 195$$

Solving both, we get $b = 45$ and $a = 105$.

So, the students playing exactly one sport are 105.

Hence, the correct answer is option C.

7. B

Let the initial volume of the solution be $5x$. The quantity of milk in the solution is $4x$, and the quantity of water is x .

Let the volume of the water added be y . The ratio after adding the water is given as,

$$\frac{4x}{x + y} = \frac{8}{5}$$

$$20x = 8x + 8y$$

$$1.5x = y$$

$$\text{Total volume} = 5x + y = 6.5x$$

Now, 39L of the mixture is being replaced by pure milk.

39L of mixture has $\frac{8}{8 + 5} (39) = 24\text{L}$ of milk and $39 - 24 = 15\text{L}$ of water.

$$\text{New volume of milk} = 4x - 24\text{L} + 39\text{L} = 4x + 15$$

$$\text{New volume of water} = x + 1.5x - 15\text{L} = 2.5x - 15$$

The new ratio given is 9:4, which can be calculated as

$$\frac{4x + 15}{2.5x - 15} = \frac{9}{4}$$

$$16x + 60 = 22.5x - 135$$

$$6.5x = 195$$

$$x = 30$$

$$y = 1.5x = 45$$

So, the volume of water added is 45 litres.

Hence, the correct answer is option B.

8. C

Number of girl students = $4y$

Number of boy students = $3x$

$$4y + 3x = 150 \text{ ----- (1)}$$

If the number of girls increases by 50% and the number of boys becomes two-thirds of its original value, while keeping the total number of students the same

$$\text{Number of girl students} = 4y \times 1.5 = 6y$$

$$\text{Number of boy students} = 3x \times \frac{2}{3} = 2x$$

$$6y + 2x = 150 \text{ ----- (2)}$$

Multiplying equation (1) by 3 and equation (2) by 2 and subtracting them

$$12y + 9x = 450$$

$$12y + 4x = 300$$

$$5x = 150$$

$$x = 30$$

$$y = 15$$

Therefore,

The original number of boys = 90

The original number of girls = 60

The new number of boys = 60
The new number of girls = 90

Let's assume the average weight of boys is b and the average weight of girls is g .
In a class, there are 150 students, and the average weight is 42 kg
 $90b + 60g = 150 \times 42$

Dividing by 6 on both sides

$$15b + 10g = 25 \times 42 \text{ ----- (3)}$$

The new average weight is 43 kg. Also, it was observed that the average weight of boys and girls remained unchanged
 $60b + 90g = 150 \times 43$

Dividing by 6 on both sides

$$10b + 15g = 25 \times 43 \text{ ----- (4)}$$

Multiplying equation (4) by 3 and equation (3) by 2, and subtracting them

$$30b + 45g = 75 \times 43$$

$$30b + 20g = 50 \times 42$$

$$25g = 25 \times 45$$

$$g = 45$$

$$\text{Thus, } b = 40$$

Therefore, the sum of the average weight of boys and girls = $b + g = 40 + 45 = 85$ kg

Alternate Explanation:

We can say that the value by which the number of girls increased should be equal to the decrease in the number of boys (to keep the total number of students fixed).

$$\text{So, } 0.5g = \frac{1}{3}b$$

$$\Rightarrow \frac{b}{g} = \frac{3}{2}$$

Since total students are 150, $b = \frac{3}{5} \times 150 = 90$ and $g = \frac{2}{5} \times 150 = 60$

Now, the equations,

$$90b + 60g = 150 \times 42$$

$$60b + 90g = 150 \times 43$$

Adding both the equations,

$$150(b + g) = 150(42 + 43)$$

$$\Rightarrow b + g = 85$$

9. B

The triplets with a sum greater than or equal to 11 are (5, 5, 5), (5, 5, 3), (5, 5, 2), (5, 5, 1), (3, 3, 5).

We know that the probability of rolling a 5 is $\frac{1}{6}$, the probability of rolling a 3 is $\frac{1}{6}$, the probability of rolling a 2 is $\frac{1}{3}$ and the probability of rolling a 1 is $\frac{1}{3}$.

The number of ways to get (5, 5, 5) is 1 and the probability to roll (5, 5, 5) = $1 \times \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} = \frac{1}{216}$

The number of ways to get (5, 5, 3) is 3 and the probability to roll (5, 5, 3) = $3 \times \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} = \frac{3}{216}$

The number of ways to get (5, 5, 2) is 3 and the probability to roll (5, 5, 2) = $3 \times \frac{1}{6} \times \frac{1}{6} \times \frac{1}{3} = \frac{1}{36}$

The number of ways to get (5, 5, 1) is 3 and the probability to roll (5, 5, 1) = $3 \times \frac{1}{6} \times \frac{1}{6} \times \frac{1}{3} = \frac{1}{36}$

The number of ways to get (3, 3, 5) is 3 and the probability to roll (3, 3, 5) = $3 \times \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} = \frac{3}{216}$

Total probability = $\frac{1}{216} + \frac{3}{216} + \frac{1}{36} + \frac{1}{36} + \frac{3}{216} = \frac{1 + 3 + 6 + 6 + 3}{216} = \frac{19}{216}$

Hence, the correct answer is option B.

10. **A**

The given series are $a_n = 13 + 6(n-1)$ and $b_n = 15 + 7(n-1)$. They can be written as,

$$a_n = 13 + 6(n-1) = 13 + 6n - 6 = 7 + 6n$$

$$b_n = 15 + 7(n-1) = 15 + 7n - 7 = 8 + 7n$$

Let us see the first few terms of both the series,

a_n has 13, 19, 25, 31, 37, 43, 49, 55, 61, ...

b_n has 15, 22, 29, 36, 43, 50, 57, 63, ...

We can see that the common term of both series is 43, and since the common difference of the first series is 6 and the second series is 7, the series with common terms will have a common difference of $\text{lcm}(6, 7) = 42$.

So, the series with common terms will be,

43, $43 + 42$, $43 + 2 \times 42$, ...

The first 3-digit number of the series is $43 + 2 \times 42 = 127$.

The last 3-digit number can be calculated as,

$$43 + (n-1)42 < 1000$$

$$(n-1)42 < 957$$

$$n-1 < 22.8$$

$$n < 23.8$$

$$n = 23$$

$$\text{Last three-digit number} = 43 + (23-1)42 = 967$$

The number of three-digit numbers = $23 - 2 = 21$, as the first two terms of the series are two-digit.

$$\text{Sum of all the three-digit numbers} = \frac{21}{2} (127 + 967) = 11487$$

Hence, the correct answer is option A.

11. **E**

We know that $5^2 \text{ mod } 7 = 25 \text{ mod } 7 = 4$

Also $2^3 \text{ mod } 7 = 8 \text{ mod } 7 = 1$

$$\Rightarrow (5^{41}) \text{ mod } 7 = (5^2)^{20} \times 5 \text{ mod } 7 = (5^2 \text{ mod } 7)^{20} \times (5 \text{ mod } 7)$$

$$\Rightarrow (5^{41}) \text{ mod } 7 = (4^{20} \times 5) \text{ mod } 7 = 2^{40} \text{ mod } 7 \times 5 \text{ mod } 7$$

$$\Rightarrow (5^{41}) \text{ mod } 7 = (2^3 \text{ mod } 7)^{13} \times 2 \text{ mod } 7 \times 5 \text{ mod } 7$$

$$\Rightarrow (5^{41}) \text{ mod } 7 = (1 \times 2 \times 5) \text{ mod } 7 = 3$$

Now, we have to calculate the remainder when 2^{88} is divided by 7.

$$\begin{aligned}
 (2^{88}) \bmod 7 &= (2^3 \bmod 7)^{29} \times 2 \bmod 7 \\
 (2^{88}) \bmod 7 &= (1 \times 2) \bmod 7 = 2 \\
 \Rightarrow (2^{88} \times 5^{41}) \bmod 7 &= (3 \times 2) \bmod 7 = 6
 \end{aligned}$$

12. **C**

The final amount using compound interest is given using the formula $P(1 + r)^n$

At the end of two years, the amount = $100000(1.15)^2 = 132250$

Let each instalment be x in the first scheme.

Time value of money of first instalment = $x(1.15)$

Time value of money of second instalment = x

$$x(1.15) + x = 132250$$

$$x = 61511.6$$

At the end of three years, amount = $100000(1.15)^3 = 152087.5$

Let each instalment be y in the second scheme.

$$y(1.15)^2 + y(1.15) + y = 152087.5$$

$$3.4725y = 152087.5$$

$$y = 43797.6$$

$$\text{Difference} = x - y = 61511.6 - 43797.6 = 17714$$

Hence, the correct answer is option C.

13. **B**

$$\text{Given, } y(x) = mx + c$$

When $x = -1$, $y(-1) = -m + c$ and it is given $y(-1) = 3$

$$\text{So, } -m + c = 3 \text{-----equation (1)}$$

When $x = 3$, $y(3) = 3m + c$ and it is given $y(3) = 11$

$$\text{So, } 3m + c = 11 \text{-----equation (2)}$$

Upon subtracting, equation (1) from equation (2),

$$(3m + c) - (-m + c) = 11 - 3$$

$$\Rightarrow 4m = 8$$

$$\Rightarrow m = 2$$

Putting value of m in equation (1), $c = 5$

$$\text{So, } y(x) = 2x + 5$$

$$\text{So, } y(2) = 2 \times 2 + 5 = 9$$

$$\text{So, } y(y(2)) = y(9) = 2 \times 9 + 5 = 23$$

14. **B**

In the numerator we see $81 + 28 - 109 = 0$

Here we can use the formula if $a + b + c = 0$ then $a^3 + b^3 + c^3 = 3abc$

$$\text{So, } 81^3 + 28^3 - 109^3 = 81^3 + 28^3 + (-109)^3 = 3 \times 81 \times 28 \times (-109)$$

Again, in the denominator we can use $a^2 - b^2 = (a + b)(a - b)$

$$\text{So, } 86^2 - 23^2 = (86 + 23)(86 - 23) = 109 \times 63$$

Hence the expression becomes $\frac{3 \times 81 \times 28 \times (-109)}{109 \times 63}$ which on cancellation gives -108 as the answer.

15. **D**

To find the highest power of 12 that divides $99!$, we first need to factor 12 into its prime

$$12 = 2^2 \times 3$$

Next, we will determine how many times each of these prime factors appears in 100!.

The number of factors of 2 in 99! is calculated as,

The formula to find the highest power of a prime p in n! is:

$$\text{The formula to find the highest power of a prime } p \text{ in } N! = \left[\frac{N}{p} \right] + \left[\frac{N}{p^2} \right] + \left[\frac{N}{p^3} \right] + \dots$$

For p=2 and N = 99 :

$$\left[\frac{99}{2} \right] + \left[\frac{99}{2^2} \right] + \left[\frac{99}{2^3} \right] + \dots = 49 + 24 + 12 + 6 + 3 + 1 = 95$$

So, the highest power of 2 in 99! is 95.

The number of factors of 3 in 99! is calculated as,

For p=3 and N = 99 :

$$\left[\frac{99}{3} \right] + \left[\frac{99}{3^2} \right] + \left[\frac{99}{3^3} \right] + \dots = 33 + 11 + 3 + 1 = 48$$

So, the highest power of 3 in 99! is 48.

Since $12 = 2^2 \times 3$, we need to determine how many complete sets of 2^2 and 3^1 we can form:

- The number of times 2^2 can be formed from 95 factors of 2 is $\left[\frac{95}{2} \right] = 47$.
- The number of times 3^1 can be formed from 48 factors of 3 is 48.

We have to take the minimum of the two numbers, and we can see that the limiting factor is the number of times 2^2 can be formed, which is 47.

Hence, the correct answer is option D.

16. B

It is given that Peter takes 4 hours more than Samuel to make 30 sandwiches.

Together, they make 50 sandwiches in 150 minutes (2.5 hours).

We need to find out how long Peter alone will take to make 40 sandwiches.

Let Samuel's time to make 30 sandwiches = x hours

Then, Peter's time to make 30 sandwiches = x + 4 hours

Work rate = sandwiches made per hour

$$\text{Samuel's rate} = \frac{30}{x} \text{ sandwiches per hour}$$

$$\text{Peter's rate} = \frac{30}{x+4} \text{ sandwiches per hour}$$

Together, when they are working

$$\text{Combined rate} = (50 \text{ sandwiches}) / (2.5 \text{ hours}) = 20 \text{ sandwiches per hour}$$

$$\text{Combined rate} = \text{Samuel's rate} + \text{Peter's rate}$$

$$\Rightarrow \frac{30}{x} + \frac{30}{x+4} = 20$$

$$\Rightarrow \frac{30(x+4) + 30(x)}{x(x+4)} = 20$$

$$\Rightarrow \frac{60(x+2)}{x(x+4)} = 20$$

$$\Rightarrow 3x + 6 = x^2 + 4x$$

$$\Rightarrow x^2 + x - 6 = 0$$

$$\Rightarrow (x+3)(x-2) = 0$$

$$\Rightarrow x \text{ cannot be } -3, \text{ thus } x = 2$$

$$\text{Peter's time for 30 sandwiches} = x+4 = 6 \text{ hours}$$

Therefore, in 1 hour, he makes five sandwiches.

So, time for 40 sandwiches:

$$40/5 = 8 \text{ hours}$$

17. C

Let the larger number be x and the smaller be y.

According to the Question,

$$x+y=16 \text{(1)}$$

$$3y-2x=3 \text{(2)}$$

From eqn 1, $x=16-y$

Using this in (2) $3y-2(16-y)=3$

$$\text{or, } 3y-32+2y=3$$

$$\text{or, } 5y=35$$

$$\text{or } y=7$$

$$\text{So, } x=16-7=9$$

Hence, the product of the numbers is $7 \times 9 = 63$

18. D

We are asked to calculate the value of $43^{380} \text{ mod } 20$,

$$43^{380} \text{ mod } 20 = (43 \text{ mod } 20)^{380} \text{ mod } 20 = 3^{380} \text{ mod } 20$$

We can see that 3 and 20 are coprime to each other, and Euler's theorem is applicable.

$$\text{Euler totient of } 20 = 20 \left(1 - \frac{1}{2}\right) \left(1 - \frac{1}{5}\right) = 20 \times \frac{1}{2} \times \frac{4}{5} = 8$$

$$3^{380} \text{ mod } 20 = 3^{(380 \text{ mod } 8)} \text{ mod } 20 = 3^4 \text{ mod } 20$$

$$3^4 \text{ mod } 20 = 81 \text{ mod } 20 = 1$$

Hence, the correct answer is option D.

19. C

$$2x^2 + 10 = 7y - 5x \rightarrow 1$$

$$4y^2 - 5y = -(7x + 17) \rightarrow 2$$

Adding eq. 1 and eq. 2 -

$$2x^2 + 10 + 4y^2 - 5y = 7y - 5x - (7x + 17)$$

$$2x^2 + 10 + 4y^2 - 5y = 7y - 5x - 7x - 17$$

$$2x^2 + 12x + 4y^2 - 12y + 27 = 0$$

$$2x^2 + 12x + 18 + 4y^2 - 12y + 9 = 0$$

$$2(x^2 + 6x + 9) + (4y^2 - 12y + 9) = 0$$

$$2(x+3)^2 + (2y-3)^2 = 0$$

The sum of 2 square numbers is 0. This is only possible when both numbers are 0.

$$\Rightarrow (x+3) = 0 \Rightarrow x = -3$$

$$\Rightarrow (2y-3) = 0 \Rightarrow y = 3/2$$

$$\Rightarrow x + y = -3 + \frac{3}{2} = -\frac{3}{2}$$

20. E

$$\sqrt{11 + \sqrt{72}} + \sqrt{11 - \sqrt{72}}$$

$$\text{Now, } 11 + \sqrt{72} = (\sqrt{9})^2 + (\sqrt{2})^2 + 2\sqrt{9}\sqrt{2} = (\sqrt{9} + \sqrt{2})^2$$

$$\text{Similarly, } 11 - \sqrt{72} = (\sqrt{9})^2 + (\sqrt{2})^2 - 2\sqrt{9}\sqrt{2} = (\sqrt{9} - \sqrt{2})^2$$

$$\text{So, } \sqrt{(11 + \sqrt{72})} = \sqrt{(\sqrt{9} + \sqrt{2})^2} = \sqrt{9} + \sqrt{2}$$

Similarly, $\sqrt{(11 - \sqrt{72})} = \sqrt{(\sqrt{9} - \sqrt{2})^2} = \sqrt{9} - \sqrt{2}$

So, $\sqrt{11 + \sqrt{72}} + \sqrt{11 - \sqrt{72}} = (\sqrt{9} + \sqrt{2}) + (\sqrt{9} - \sqrt{2}) = 3 + 3 = 6$

21. **C**

Given, $2x^2 + 11x - 138 < 0$

So, $2x^2 - 12x + 23x - 6 \times 23 < 0$

$\Rightarrow 2x(x - 6) + 23(x - 6) < 0$

$\Rightarrow (2x + 23)(x - 6) < 0$

$x < 6$ and $x > -\frac{23}{2}$

Now $-\frac{23}{2} = -11.5$

So, $x < 6$ and $x > -11.5$

Hence x can take integral values from -11 to 5

So number of possible integral values are 17

GMAT Data Insights

22. A

i) The proportion of sugar should remain the same.

Cost of the cake: Let's assume that the prices of three ingredients are \$ 4, \$ 10, and \$ 5. Let the amounts be 5kg, 3kg and 2kg.

$\frac{(5 \cdot 4 + 3 \cdot 10 + 2 \cdot 5)}{10} = 6$. Hence, cost price is \$6 per kg.

The given ratio is 5:3:2. That is, sugar is 20% of the total quantity. Let total quantity be 10kg. 2kg will be sugar.

Let us assume that x kg of the new cake is cream. So, (8-x) kg will be the proportion of flour.

The cost price should be $\$6/(1+10\%) = \$60/11$. CP = $(x \cdot 4 + (8-x) \cdot 10 + 2 \cdot 5)/10 = 60/11$

As this is an eqn with 1 variable, we can find the answer of x.

ii) The price of sugar is Rs. 30 per kg

We have no information regarding the price. With just this information, many ratios are possible, so we can't get the answer.

Hence, option A is the answer.

23. C

In a meeting held by ACS, there were 10 attendees. If N attendees are selected to deliver speeches during the meeting, and it is given that N is a positive integer, what is the value of N?

$${}^{10}C_1 = 10$$

$${}^{10}C_2 = 45$$

$${}^{10}C_3 = 120$$

$${}^{10}C_4 = 210$$

Statement 1: N is a multiple of 3.

So, N can equal 3, 6, or 9

Since we cannot answer the question with certainty, statement 1 alone is NOT SUFFICIENT.

Statement 2: There are 210 ways to select the N attendees to deliver speeches.

We already saw that ${}^{10}C_4 = 210$ and also, ${}^{10}C_6 = 210$

This means N = 4 OR N = 6

Since we cannot answer the question with certainty, statement 2 alone is NOT SUFFICIENT.

Statements 1 and 2 combined

Statement 1 tells us that N = 3 OR N = 6 OR N = 9

Statement 2 tells us that N = 4 OR N = 6

Since both statements must be true, and since N = 6 is the ONLY N-value that is shared by both statements, we can conclude that N = 6

Since we can answer the question with certainty, the combined statements are SUFFICIENT.

24.

The table above shows the number of independent bookstores in various cities.

For each of the following statements, select True if the statement can be verified as true based on the information provi...

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25. C

Distance between Town X and Town Y = 150 miles.

Both cars meet exactly halfway = after 75 miles of travel each

Car A leaves Town X for Town Y Car B leaves Town Y for Town X after some time

We're asked to find: The speed of Car B

Statement 1: Car B leaves Town Y 45 minutes (0.75 hours) after Car A leaves Town X.

This tells us the time difference between their starts, but without knowing either their speed or the ratio of their speeds, we can't deduce actual values.

So, Statement (1) alone is insufficient

Statement 2: Car B travels at a speed 10 mph faster than Car A

This gives us the relative speed difference, but we can't compute actual values without the time gap or time to meet.

So, Statement (2) alone is also insufficient.

Combining (1) and (2)

Let speed of A be x . So speed of B is $x+10$.

Let time taken by A be t . So time taken by B is $t - 45/60$ i.e. $t-3/4$

$$xt=75$$

$$(x+10)(t-3/4)=75 = xt$$

Solving we get $40t-3x=30$

Substituting $t=75/x$ we get

$$40 \cdot 75/x - 3x = 30$$

$$3x^2 + 30x - 40 \cdot 75 = 0$$

$$x^2 + 10x - 1000 = 0$$

$$\text{On solving we get } x = -5 \pm 5\sqrt{41}$$

As speed cannot be negative, we get a unique value of speed of A and hence for speed of B.

Both statements together are sufficient, but neither alone is sufficient.

26. **D**

We're told that

$$7X=4Y=9Z$$

We're asked for the value of

$$9X-5Y+4Z$$

$$\textbf{Statement 1: } 3x - y = \frac{5}{14}$$

From the question, we also know that $7X=4Y$

We now have a system of equations (2 variables and 2 unique equations) involving X and Y:

$$7X=4Y \text{ and } 3x - y = \frac{5}{14}$$

We can solve for the values of X and Y, and there will be just one value for each.

With either of those values, we can then solve for the value of Z (since $7X=9Z$ and $4Y=9Z$).

We can answer the question with the individual values of X, Y, and Z.

Thus, Statement 1 alone is sufficient.

$$\textbf{Statement 2: } 5y + 2z = \frac{53}{18}$$

From the question, we know that $4Y=9Z$

We now have a system of equations (2 variables and 2 unique equations) involving Y and Z:

$$4Y=9Z \text{ and } 5y + 2z = \frac{53}{18}$$

Since this is a standard system, we can solve for the values of Y and Z, and there will be just one value for each.

Once we have those, we can then find the value of X (since $7X=4Y$ and $7X=9Z$).

We can answer the question with the individual values of X, Y, and Z.

Thus, Statement 2 alone is sufficient.

Therefore, EACH statement ALONE is sufficient. (Option D)

27.

A historical research archive is curating three new collections of ancient manuscripts. Each collection will contain four manuscripts: two from classical antiquity and two from the medieval period. M...

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28.

After a fundraiser, the event organisers surveyed all the participants who attended about how many different types of sweets they had during the party. The attendants could have taken any number of s...

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29.

A fruit seller sold 4 kg of oranges at Rs. 120 and incurred a loss of 25%. So, he decided to mark up the price of the remaining fruits. He made a total revenue of Rs. 1000 and an overall profit of 25...

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30.

A company placed orders with Suppliers A and B, buying at least eight units from each. Supplier A's pricing: A fixed fee of \$120, with the first eight units at \$25 each, and \$7 for every additional u...

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31.

A team of 5 must be selected from 4 men and 4 women. At least 2 men and 2 women must be included. X is the total number of valid teams possible if A and B (both women) refuse to work together. Y is t...

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32. **E**

We are given that S is a set of consecutive numbers.

(i) There are two multiples of 5 in the set..

This means the interval of consecutive numbers contains exactly two numbers divisible by 5. However, this information is not sufficient to determine the exact size of the set because different intervals of different lengths can have exactly two multiples of 5. For example, the intervals from 1 to 10 and from 4 to 10 both contain two multiples of 5.

ii) There are seven multiples of 2 in the set.

Multiple intervals of different lengths can contain exactly seven multiples of 2. Therefore, statement (ii) alone is also insufficient to determine the set's size.

Ex: 2 to 14, 1 to 14, 1 to 15 and 2 to 15

Now consider both statements together. We are looking for a set of consecutive integers containing exactly two multiples of 5 and seven multiples of 2.

This will also give us more than one possible sequence. 2 to 14 and 1 to 14

So, option E is the answer.

33. **C**

i) He brought 10 litres of kerosene at 60 per litre.

Here, we know the amount of kerosene mixed. And we know the price of it. However, we do not know the ratio in which they are mixed, which will help us figure out the CP. So, with this

statement alone, we can't get the answer.

ii) The total profit earned is Rs. 240.

Here, we know the total profit. But we don't know the total cost. So, it is not possible to calculate the profit percentage.

Using both statements:

Let us assume the amount of Petrol in the mixture as x . The profit is given as 240, and we know the amount of kerosene is 10 litres, and its CP is 60 per litre.

$$77(10+x) - 70x - 60 \cdot 10 = 240$$

Upon solving this, we get $x = 10$

So, the total cost price is $70 \cdot x + 60 \cdot 10 = 700 + 600 = 1300$.

$$\text{Profit percent} = \frac{240}{1300} \times 100 = 18.4\%$$

Hence, we can calculate the profit percentage using both statements 1 and 2.

34.

The chart below displays the total number of online queries received by the tech company Citrus and the percentage of these queries resolved each day from Monday to Friday.



Use the drop-down menus t...

[View Full Explanation](#)

35.

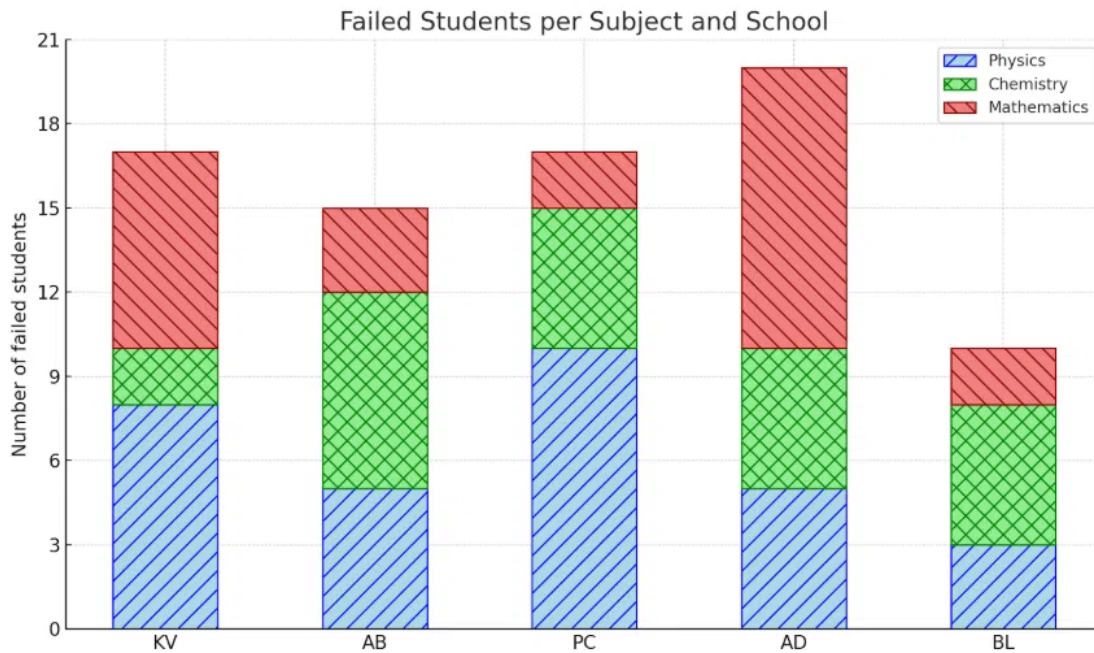
For each of the following statements, select Yes if the statement can be shown to be true based on the information in the table. Otherwise, select No.

[columns: Yes, No]

[View Full Explanation](#)

36.

The table below shows the statistics of five senior secondary schools about the number of students who failed in the subjects: Physics, Chemistry, and Mathematics.



Among the given schools, the schoo...

[View Full Explanation](#)

37.

Neha is organising a weekend workshop and needs to print 200 brochures. She is considering two printing services: a nearby print shop and an online printing service. At the nearby print shop, each b...

[View Full Explanation](#)

38.

For each of the following statements, select Yes if the statement accurately reflects the information given in the tabs. Otherwise, select No.

[columns: Yes, No]

[View Full Explanation](#)

39.

For each of the following statements, select Yes if the statement accurately reflects the information given in the tabs. Otherwise, select No.

[columns: Yes, No]

[View Full Explanation](#)

40.

For each of the following statements, select Yes if the statement accurately reflects the information given in the tabs. Otherwise, select No.

[columns: Yes, No]

[View Full Explanation](#)

41. **B**

The cost price of the mixture made by the shopkeeper would be $\frac{10x+7y}{17}$

Using the selling price, we can also get the cost price as $\frac{210}{1.19}$ rupees per kg.

Equating the two, we get the following equation:

$$10x + 7y = \frac{210}{1.19} \times 17 = 3000$$

Let's evaluate each statement individually:

Statement 1: Let us assume that $x=200$.

$$2000 + 7y = 3000. y = 1000/7 = 142.85.$$

On the other hand, if $y=200$.

$10x + 1400 = 3000. x = 160$. Hence, we cannot uniquely determine the cheaper rice. This statement is not sufficient.

Statement 2: This would give us the equation that $x+y = 360$

Using the two linear equations we can uniquely find the value of x to be ₹160 per kg

Hence, Statement 2 alone is sufficient.

GMAT Verbal Reasoning

42. **B**

Nadia says that having a software background helps leaders make better decisions. She does not say it's sufficient to make someone a good leader. Omar, however, responds as though she had said software experience guarantees effective leadership, which is a stronger claim than what Nadia implies. This is an example of a strawman fallacy.

Option A: Omar never claims that engineers can't become good leaders or improve over time. He simply says that a software background alone doesn't make someone a good leader — which targets the (misrepresented) present state, not long-term potential. It's true that he implies limitations in engineers, but that's not the flaw. The flaw is that he attacks a stronger claim than Nadia actually makes.

Option C: Omar actually distinguishes the two: he argues that a software background does not imply leadership ability. So he's not confusing the two — he's saying one doesn't guarantee the other.

It sounds close to the topic, but the error is not one of confusion — it's a misrepresentation of the original argument.

Option D: This would be relevant if the argument turned on universality (i.e., "all tech leaders must have X"), but Nadia merely says that a software background helps leaders. There's no claim that all leaders need identical experience, so this isn't the flaw in Omar's response. It brings up an issue about generalisation, but that's not what's at stake in the actual premise.

Option E: Omar does not say these skills are unrelated — in fact, he brings up communication as another skill that's important for leadership. But he doesn't reject or compare it to decision-making at all. There's no presumption here about their relationship. The words "decision-making" and "communication" both appear in the conversation, but Omar doesn't make any flawed assumptions about how they relate.

43. **B**

Option B is the correct answer. The hypothesis in question is: Working remotely was no more vulnerable to security breaches than working on-site. The number of compromised accounts alone doesn't tell us much unless we know how many total remote and on-site employees there were. What matters is the rate or proportion of breaches within each group. If Firm Z had 1,000 remote workers and 10,000 on-site workers, the rate of breaches among remote workers would be 100% and among on-site workers only 10%, indicating remote work is more vulnerable.

Option A might reveal why a group was more vulnerable, but not whether they were more vulnerable.

Option C introduces complexity but doesn't help establish the overall vulnerability of remote vs. on-site workers.

Option D is about impact or type of breach, not the likelihood of breach.

Option E looks at other companies, not Firm Z, and so doesn't help directly evaluate the hypothesis about Firm Z.

44. **B**

The passage primarily explores how both individual cognitive tendencies (present bias) and governmental structures contribute to short-term decision-making in policy. It details how uncertainty, immediate costs, electoral incentives, and lack of identification with future governments lead those in power to delay or avoid long-term planning. These factors collectively demonstrate how present bias operates not just at the individual level but is exacerbated by institutional and political frameworks, ultimately affecting governance and policy outcomes. The author is not merely blaming politicians or the public; rather, he offers an analysis of the psychological and systemic dynamics that contribute to poor long-term policy decisions. Option B best describes this aim.

Option A can be eliminated because while the passage mentions electoral gains and fiscal handouts, the overall aim is broader. Option C places exclusive blame on individual psychology, ignoring the critical point that institutional structure and political incentives also play a major role. Thus, this is also not the correct choice.

Option D suggests that the passage is structured as a “contrast”, which is misleading. The passage draws a parallel, not a contrast, between individuals and governments, arguing that both are similarly vulnerable to present bias. We can also eliminate Option E since the passage does not propose reforms; it describes the problem and analyses its roots, but does not offer solutions.

45. **C**

We see that the author draws a direct comparison between individuals and governments, emphasising that both are prone to focusing on the present rather than the future when faced with uncertainty, delayed benefits, or immediate political costs. The author explains that because politicians and policymakers are individuals subject to the same psychological tendencies as the general population, and because governments often act in self-preserving ways (for example, re-election concerns), they too may postpone or avoid actions that carry long-term benefits but lack immediate rewards. Option C best reflects this idea.

None of the remaining choices correctly presents the message. For instance, Option A is a distortion: the author does not frame the issue in terms of being “shielded” or “institutional gaps.” Similarly, Option B is misleading: though political incentives are certainly discussed, the passage also touches on economic consequences, such as deficits. Option D also introduces a comparative judgment that the author does not make; he does not quantify or compare the societal impact between individual and governmental levels. Option E overextends what’s given in the passage: the author does not assert that decisions “do not consistently” benefit future administrations.

46. **D**

The most direct reasoning here is presented in Option D. The author discusses how governments, much like individuals, are subject to present bias, often prioritising short-term political survival over long-term societal benefit. Because long-term reforms tend to lack immediate payoffs and can be politically risky, they are generally avoided unless the current government has a strong incentive to think beyond the short term. One such incentive, as implied in the passage, is when a government expects to remain in power for an extended period. We can derive this idea from the following line: [“The present self—that is, the government in power at the time—has only a limited identification with future governments, because it may not be re-elected.”] This implies that a lack of future continuity in governance contributes to present-biased behaviour - governments are disincentivised from making long-term decisions if they believe future administrations, not themselves, will reap the rewards or bear the consequences. It follows, then, by contrast, that if a government does expect to remain in power for a long time, it would identify more strongly with its future self, reducing this disconnect and making it more willing to absorb short-term costs for long-term gains.

Option A is a trap because it superficially fits the pattern of government action described in the passage: short-term gain, long-term pain. But when we compare it closely with the premise of the question - a far-reaching environmental reform with high upfront costs and delayed benefits - the idea breaks down since it fails to explain why the risk for high upfront costs and delayed rewards would be borne. Options B, C and E are completely tangential to the discussion - they do not address any of the points presented in the passage.

47. **A**

The structure of the argument is as follows:

The airline will replace free meals with paid meals. Critics object that this will reduce

customer satisfaction. The author's rebuttal is that customer satisfaction probably won't drop overall. Lower ticket prices will attract price-sensitive customers who care more about affordability than free meals.

First boldface: This is the critics' objection to the airline's plan.

Second boldface: This is the author's prediction that aims to counter the objection.

Therefore, Option A is the correct answer.

Option B: The first is not a forecast but an objection. The second is not a counterexample, but a prediction that undercuts the objection.

Option C: The first is not a hypothesis, and the second is not evidence to support it.

Option D: The second boldface responds to the first objection rather than strengthening the policy in a direct sense.

Option E: The first boldface is not an assumption, and the argument doesn't reject it outright but counters it with a prediction.

48. **B**

The author acknowledges that social media is a factor often cited in discussions about rising despair and emotional dysfunction, labelling it part of the "technology story." However, he critiques the overreliance on this explanation by noting that social media exists globally, yet the emotional and social crisis he describes is particularly acute in the U.S. This suggests that while social media may play a role, it does not fully account for the scale or nature of the American crisis. The deeper issue, he argues, lies in the failure of moral formation - the weakening of institutions that once taught people how to live in community and treat others with respect. Option B, thus, best captures the author's argument.

Option A overstates the point: the author does not say social media is harmless or "exempt"; instead, he argues it is not sufficient to explain why the American situation is uniquely bad. Option C is also an unsupported extrapolation: though the author specifically states that even those not on social media experience these issues, he does not claim social media is influencing them indirectly. Option D is an inaccurate causal claim: we are not told that social media replaced institutions, but only that these institutions are failing. Similarly, Option E understates the author's position: he never denies social media's contribution; instead, he simply argues it is not the core cause.

49. **E**

The anecdote of the restaurant owner being forced to eject a rude customer once a week serves to concretise the author's broader argument: that something has shifted in how people behave in public, and that long-standing norms of decency and respect are eroding. The story is not just about restaurants - it functions as a microcosm of a broader moral breakdown, where individuals feel increasingly entitled to act cruelly without regard for the expectations of shared spaces. This growing disconnect between expected social behaviour and how people actually behave in public spaces reflects the deeper theme of the passage: a lack of moral formation and the loosening of social and institutional constraints on selfishness and cruelty. Option E best reflects this sentiment.

The remaining choices do not reflect the intent of presenting the example. Option A mischaracterises the anecdote by focusing on "societal pressures" and "customer expectations," which implies the issue is more about market dynamics or shifting demands than moral behaviour. Option C is also slightly off: it generalises too quickly from the anecdote to the loss of cultural standards across all community spaces.

Option B subtly suggests the trend is "unique" to the hospitality sector, which the passage does not state. Note that the restaurant anecdote is meant to reflect a wider cultural problem, not a trend limited to restaurants. Option D similarly focuses on consumer-facing roles being the "first victims," which personalises the issue more than the author intends. The anecdote is not about employee suffering per se, but about the change in public

conduct.

50. C

To challenge the author's central argument that the societal crisis of despair, cruelty, and alienation stems most fundamentally from a breakdown in moral formation, we need to search for a choice that offers evidence that undermines the causal link between moral/institutional decline and the emotional/social dysfunction observed. Let us examine the given choices -

Option A: This is a bit too narrow - a lack of improvement in workplace ethics programs does not disprove the broader claim about the role of families, schools, or religious groups in moral development. It also focuses on polarisation and suicide, which, while relevant, are not the sole issues the author discusses.

Option B: This seems to be a red herring - it suggests that some people with moral instruction still act selfishly, but the author never claims moral formation creates perfect people. He only states that its breakdown at a societal level contributes to widespread dysfunction.

Option C: This undermines the author's thesis by showing that even where institutions fostering moral formation are strong, the crisis persists, suggesting that other factors, such as economic conditions, may be more decisive. This attacks the author's core argument and thus could be the likely answer.

Option D: This shifts the focus to economic data. While this could offer an alternative explanation, it does not directly challenge the author's main point unless we also know that moral formation remains intact in those contexts (which we do not).

Option E: This adds nuance about technology's role, but it does not address moral formation directly. That kindness increases without impacting depression weakens the tech narrative, but not the author's central thesis about character development and institutional failure.

Hence, Option C is the best choice.

51. D

Let us evaluate the given choices -

Option A generalises the issue as an "inevitable consequence" of modernisation across "all globalised societies." The author explicitly notes that while social media and certain structural forces are global, the depth of the crisis is especially American, implying that the problem is not universal or inevitable, but particular and avoidable.

Option B also overstates the author's position. The author does not completely dismiss external pressures like economic insecurity or demographic change; rather, he says these do not fully explain the problem.

Option C is a trap based on reversed causality. The author argues that emotional and relational dysfunction underlies social dysfunction, not the other way around. Saying the crisis is "chiefly social" misrepresents the structure of his argument.

Option D most closely reflects the author's central argument among the given choices. While acknowledging the partial validity of other narratives, such as those focused on technology, economics, or demography, the author ultimately emphasises that the deepest cause of America's sadness, rudeness, and despair is the breakdown in moral formation. He argues that institutions once responsible for teaching empathy, responsibility, and kindness, such as families, schools, religious groups, and communities, have weakened, leaving individuals less prepared to engage with others in a prosocial or cooperative way. This moral deficit, rather than just external conditions, lies at the heart of the societal crisis.

Option E is also inaccurate. The author does not say institutions are irrelevant; instead, he mourns their diminished capacity to shape behaviour, which is not quite the same thing.

52. B

Let us evaluate the given choices to identify a valid inference -

Option A: This is too extreme. The evidence shows that British tin reached Mediterranean societies, but there is no support for the claim that it was their exclusive source.

Option B: This seems to be directly supported by the timeline and geography of the archaeological finds. The presence of British tin in two shipwrecks, separated by 700 years and located in widely different parts of the Mediterranean, strongly suggests that long-distance trade in tin, specifically from Britain to the Mediterranean, continued over many centuries.

Option C: This is speculative. While British tin was found in a shipwreck near France from 600 BC, there's no evidence about who the traders were or how the trade routes evolved in terms of intermediaries. The passage doesn't comment on the identities or nationalities of traders, so this goes well beyond what is supported.

Option D: This option is irrelevant to the evidence. The presence of British tin in shipwrecks tells us it was traded, not that it was superior in quality. No comparative assessment of ore quality is made or implied, so this conclusion is unsupported.

Option E: The evidence actually suggests continuity of British tin export, not a shift. Since British tin appears in shipwrecks before and after 1300 BC, the most reasonable inference is that trade persisted.

Hence, Option B is the correct choice.

53. **A**

Let us examine the given choices -

Option A: This statement bridges the gap between limited evidence (a few shipwrecks containing British tin) and the sweeping conclusion that Britain was a major supplier. The argument assumes that these shipwreck finds are not isolated anomalies but indicative of frequent and substantial trade. If we negate this - that the few finds do not imply regular, large-scale export - the conclusion falls apart. Hence, this assumption is both critical and necessary.

Option B: The claim is that Britain was a major supplier, not the only one. Even if Mediterranean civilisations had some tin sources, Britain could still have been significant. Negating this - asserting that local sources existed - does not weaken the argument. Thus, while it might support the argument if true, it is not essential for the argument to hold.

Option C: This choice introduces unnecessary specifics. The argument only needs Britain to have exported tin in meaningful quantities; it does not require a permanent, two-way trade system. If we negate this - suggesting trade was intermittent or unidirectional - the argument still stands.

Option D: This option is a trap - the argument centers not on trade patterns broadly, but on the origin of tin found in specific contexts. Even if the shipwrecks are not representative of all Bronze Age trade, the presence of British tin in several cases could still indicate a significant supply role. Negating this assumption does not invalidate the core claim.

Option E: This assumption is irrelevant to the main argument. Whether tin travelled by sea, land, or river has no bearing on whether southwest Britain was a major source. The evidence used is maritime, but the claim is about origin, not method. If we negate this - that some tin was transported overland - nothing essential about the British tin supply argument is affected.

Hence, Option A is the correct choice.

54. **C**

The boldfaced sentence introduces a key scholarly challenge: although southwest Britain had rich tin deposits, confirming their use in Mediterranean societies has been historically elusive. This sets up the research problem that motivates the study. The rest of the passage then addresses this uncertainty through new geographical and chemical evidence, showing that British tin was, in fact, found in shipwrecks in the eastern Mediterranean. Thus, the sentence frames a debate or gap in knowledge that the author uses recent scientific findings to help resolve - this makes Option C the best choice.

The remaining choices either misrepresent or distort the intent. For example, Option A is incorrect: there is no counterargument presented since the sentence does not refute a prior claim or introduce a view that the author opposes. Option B is also a distortion: the boldfaced sentence does not refer to a belief, but rather to a difficulty in proving something. We can similarly eliminate Option D: while geographic separation is an implied challenge in trade, this is not the focus of the sentence. Option E is also unrelated: the sentence is about proving the source of tin, not comparing copper and tin availability.

55. **D**

The last paragraph sets up a scenario: we know a lot of copper was being mined → bronze requires tin → therefore, a lot of tin must have been sourced and traded. The leap to “it must have come, in large part, from Britain” rests on the assumption that other sources could not have supplied that volume. However, that claim is not supported by data in the passage. There may well have been other major or even now-lost sources of tin, including from central Asia, central Europe, or currently unrecognised deposits. Thus, the core limitation is the assumption of exclusivity without ruling out other plausible sources. Option D best reflects this idea.

We can eliminate Option A since the broader reasoning does not hinge on exact proportions of tin and copper, only on general volume, so this is not the central flaw. Option B focuses on the methodology discussed earlier in the passage, not the logical structure of the final inference about Britain's role. Option C is also not central to the discussion - the passage acknowledges widespread bronze use, implying tin use was the norm. Option E might seem like a valid critique; however, it focuses only on Britain's deposits, not on the flawed logic of ruling out other sources. It identifies a problem, but not the core limitation of the argument in the last paragraph.

56. **C**

In this question, a study observes that chess players who received coaching before age 10 are more likely to become grandmasters. The researchers conclude that early coaching causes this success. The objection says this is not necessarily causal, rather, early talent and motivation likely led both to early coaching and eventual success.

Option C is the correct answer. It directly supports the objection. It backs the claim that coaching is a response to early talent, not its cause. If early coaching is typically initiated because parents recognise unusual ability or motivation, then it makes sense that those same children are more likely to succeed later, regardless of when the coaching begins.

Option A: This contradicts the original study's observation, not its conclusion. While it weakens the general claim that early coaching guarantees success, it does not address the core objection, which is about pre-existing talent explaining both coaching and performance. So it's a red herring.

Option B: This adds a new confounding factor but doesn't support the objection. This suggests that early coaching might cause more practice, which might explain the success, thus supporting the original conclusion, not weakening it.

Option D: This raises a point about instructor quality, which introduces another variable. It doesn't support the objection that pre-existing talent caused both early coaching and later success.

Option E: This seems to support the idea that coaching is necessary, which bolsters the researchers' conclusion. But, it works against the objection by implying that just having talent or an early start is not enough without coaching.

57. **C**

Here, there is a claim by biologists: A frog species disappeared from a region after a fungal disease outbreak. The basis for the claim is that field surveys found no frogs after the

outbreak. However, new evidence indicates that frog remains were found in sediment layers deposited after the outbreak. The question here is why this new evidence disproves the original belief.

The gap here is between the remains found in later sediments and the claim that frogs disappeared earlier. To reconcile the two, we need a reason why the remains don't necessarily show the frogs were alive after the assumed extinction event. Option C is the best reason here. It explains how the frog remains could be from before the species disappeared, even if they appear in later layers. So the remains don't necessarily mean the species survived past the outbreak.

Option A: This challenges the reliability of the original surveys, rather than defending their conclusion. That would undermine the assumption, not explain why the new evidence doesn't disprove it.

Option B: This concerns other species' recovery, not whether the focal species survived; it doesn't explain the new evidence.

Option D: This could explain why they're hard to detect, but again, it undermines the original belief, rather than defending it. It might weaken the extinction claim, rather than explain why the new evidence doesn't contradict it.

Option E: Interesting, but it doesn't explain the timing of the frog remains. In fact, it could suggest that a few infected frogs were around after the outbreak, which might weaken the assumption, not support it.

58. E

In this question, the given premise is that a STEM magnet program was introduced. We are told that following this, over the past few months, enrollments have increased, and resources have become stretched. The suggestion to solve this problem is to move the magnet program to a separate campus, which is expected to improve the educational experience for all students.

In order to conclude that relocating the magnet program will solve the resource problem and improve education, we must assume that the magnet program is the main cause of the increased enrollment and resulting strain. Option E mentions this assumption. If some other factor caused the enrollment spike, then moving the magnet program wouldn't ease the overcrowding. Therefore, the conclusion relies on this assumption.

Option A: This may support the idea that STEM students would be happier, but it says nothing about improving the experience for all students, especially the general population. Also, student preferences are not key to the argument.

Option B: Whether students prefer magnet courses over general ones is irrelevant to the argument. If we negate this option, we conclude that, even if general courses are equally popular, the problem of overcrowding remains. Thus, this option is not a necessary assumption.

Option C: This strengthens the argument but is not necessary. The conclusion could still follow even if students are not currently frustrated, as it only claims they would have a better experience if resources were improved.

Option D: This is out of scope. The argument is about moving the existing program to reduce crowding, not about what other schools offer.

59. B

The principle states that an investment strategy is prudent only if it doesn't involve an unacceptable level of risk. The argument concludes that Noah's strategy is not prudent simply because it involves less stable assets, assuming that this automatically means the risk is unacceptable. But this is not justified. The principle allows for some risk—it only rules out unacceptable risk. Option B correctly identifies this flaw: the argument assumes that any increase in exposure to volatile assets must result in an unacceptable level of risk, which the principle does not support.

Option A talks about diversification helping manage risk — that might be true, but the

argument doesn't deny that. It simply concludes that the strategy isn't prudent based on the type of asset, not the portfolio as a whole.

Option C says it assumes traditional investments are always less risky — but the argument doesn't rest on a comparison to blue-chip stocks. It's about the supposed unacceptability of risk, not relative risk.

Option D is irrelevant. High returns don't matter here. The principle is about prudence based on risk, not profit.

Option E talks about confusing potential loss with guaranteed loss — but again, the issue is not whether loss is likely, but whether the level of risk is unacceptable.

60. A

The first company saw a 25% increase in productivity after introducing remote work for two years, leading to the conclusion that remote work boosts productivity.

The second study, involving two similar companies with long-term remote work policies, showed no change in productivity over the same period.

Option A: Although the second study shows no change, the fact that these companies have long had remote work means they might have experienced productivity boosts early on, which the study doesn't capture. Therefore, the second study does not contradict the idea that remote work can increase productivity. This option best fits the idea that the second study does not refute the first study's conclusion.

Option B: The first study's increase could be due to other variables not controlled for. However, the word "prove" is too strong. The second study shows no effect in other companies, but that does not disprove remote work as a factor in the first company - it merely casts doubt or raises questions.

Option C: This is plausible but not the strongest conclusion because the companies differ in terms of how long they've had remote work, which could explain differences in productivity changes. The difference might be due to exposure time rather than inherent company differences.

Option D: This option incorrectly assumes we have data comparing short-term vs. long-term effects directly. The two studies involve different companies at different stages of remote work, so we cannot conclude that long-term effects are the same as short-term effects.

Option E: This is too strong — the second study's findings occur much later in the remote work timeline. Lack of recent productivity change does not necessarily disprove the initial increase seen in the first company.

61. C

The paradox lies in why the older telescope discovered so many comets in a short time, despite the newer telescope being superior in design and capabilities. A high-performing telescope should, in theory, identify more comets. Yet, this outcome did not occur. Let us examine the options -

Option A: While this suggests that the new telescope might scan fewer areas in a given period, it does not address why the older telescope still significantly outperformed it in discovering comets. This fails to directly resolve the paradox.

Option B: Budget constraints could have influenced operational capacity, but this does not explain the higher-than-average performance of the older telescope during the same period.

Option C: This directly resolves the paradox by explaining that the older telescope's location happened to coincide with an exceptional comet event, leading to its unusual success.

Option D: While this might suggest that the new telescope discovers different kinds of comets, it does not explain why the older telescope identified more comets overall during the period in question.

Option E: Public outreach efforts may explain why the older telescope's findings were publicized but do not explain the discrepancy in discovery rates between the two telescopes.

62. E

According to the passage, one key distinction between different types of fictional experiences lies in how they are processed by the brain: events that are directly perceived, such as scenes in a film, are encoded more vividly in memory than events that must be imagined, such as those experienced while reading a novel. This is because perceptual memory is stronger when the sensory experience comes from actual stimuli rather than being internally constructed. Based on this, we observe that Option E is the correct choice.

Options A and D contradict the passage: the author suggests differences in memory encoding based on sensory input vs. imagination, implying unequal contributions. Moreover, he says perceptual memory is stronger for directly perceived content, i.e., the film. Option B is unsupported since the passage does not compare the effectiveness of different media on reinforcing self-image. Nor does the author discuss how "resistant" certain memories are over time, as mentioned in Option C.

63. C

The passage asserts that one of the core functions of autobiographical memory is to guide decisions by referencing past experiences and their consequences: [*"Autobiographical memories can also guide our decisions by informing us about the consequences of our prior choices. They also promote social sharing and bonding. Increasingly, psychologists are realising that memories of fictional stories can serve similar functions."*] We need to look for a choice that supports this claim -

Option A seem viable, but it only establishes that fictional narratives contain moral content, not that such content actually influences decisions.

Option B mentions decision-making speed, but this does not address how or why decisions are influenced by fiction.

Option C directly supports the argument: if people recall fictional events to explain or justify real-world decisions, then those memories are clearly playing a similar functional role to autobiographical ones.

Option D introduces a tangential idea about dreaming and emotional attachment, which may correlate with engagement but not necessarily decision-making.

Option E contrasts visual versus imagined memory retention, which relates more to memory vividness and accuracy than to the decision-guiding function under discussion.

Hence, Option C is the best choice.

64. B

The passage discusses how people gravitate toward fictional stories that resonate with their identity and how these memories can serve similar functions as autobiographical ones, including validating self-perception and guiding future decisions. If a person identifies with a fictional character who overcomes social anxiety, this likely reflects a desired version of themselves and could encourage personal change or reinforce their evolving identity. Option B best captures this idea.

The remaining choices cannot be inferred from the passage. For example, we can eliminate Option A since the passage does not suggest prior experience is necessary for identification; resonance can be aspirational. Similarly, the author notes that perceptual vividness affects memory, not necessarily the degree of identification or influence. So Option C is out of the picture. Option D is also a distortion since the author never suggests replacement; rather, he argues for parallel and complementary functions. Option E is unsupported and contrary to the author's tone, - he focuses on shared utility, not competition or hindrance.