

GRE Sample Paper 01

A) Test Components: Analytical Writing — Verbal Reasoning — Quantitative Reasoning

B) Total Questions: 108 Questions

C) Total Time Allowed: 3 Hours 45 Minutes

- **Analytical Writing:** 2 Essays — 60 Minutes
- **Verbal Reasoning:** 2 Sections — 82 Minutes Total
- **Quantitative Reasoning:** 2 Sections — 94 Minutes Total

D) Marking Scheme:

- **Correct Answer:** +1 Point
- **Incorrect/Unattempted:** 0 Points (No Negative Marking)
- **Multi-blank/Equivalence:** No partial credit.

SECTION I: ANALYTICAL WRITING

1. Analyze an Issue (30 Minutes)

"The primary objective of higher education should be to challenge students to fundamentally question their deeply held personal assumptions, rather than to teach them how to harmonize with existing professional structures."

2. Analyze an Argument (30 Minutes)

The following appeared in a memorandum from the operations manager of NovaPac Logistics to the executive board.

"Three years ago, our main competitor, Apex Freight, replaced all of its traditional regional sorting hubs with automated drone-assisted sortation facilities. Since then, their average delivery processing times have dropped by 40 percent and their local warehouse labor expenses have plummeted. In order to reclaim our declining market share, minimize overhead costs, and significantly maximize delivery speeds, NovaPac should immediately convert all of our regional hubs into identical automated drone-assisted sortation facilities."

SECTION II: VERBAL REASONING - PART 1

Q1. The architect's latest skyscraper was surprisingly _____; although his previous designs were famous for their ornate and baroque details, this structure was characterized by stark, clean lines and a total lack of embellishment.

- A. Flamboyant
- B. Austere
- C. Eclectic
- D. Pretentious

Q2. Despite the scathing reviews from critics who labeled the film a "disastrous failure," the director remained _____, steadfastly defending his artistic choices in every interview.

- A. Compliant
- B. Diffident
- C. Obdurate
- D. Irrelevant

Q3. The CEO was known for her (i) _____ nature; she would frequently change major corporate strategies on a whim, making it nearly impossible for her subordinates to (ii) _____ the company's future direction.

- A. (i) Capricious; (ii) Forecast
- B. (i) Stolid; (ii) Influence
- C. (i) Capricious; (ii) Undermine
- D. (i) Magnanimous; (ii) Forecast

Q4. While the research paper was undeniably (i) _____, offering a mountain of data, the author's prose was so (ii) _____ that only a handful of specialists in the field could actually comprehend the findings.

- A. (i) Comprehensive; (ii) Lucid
- B. (i) Sparse; (ii) Opaque
- C. (i) Comprehensive; (ii) Arcane
- D. (i) Trivial; (ii) Pedantic

Q5. The passage implies that the "traditional narrative" regarding the decline of the Roman Empire:

- A. Has been completely validated by recent archaeological digs.
- B. Fails to account for the economic resilience of the Eastern provinces.
- C. Was written primarily by the invading Gothic tribes.
- D. Is the only viable explanation for the loss of central authority.

Q6. According to the passage, the primary factor that accelerated the spread of the Black Death in urban centers was:

- A. The lack of medical knowledge among the clergy.
- B. The increased frequency of trade routes connecting distant ports.
- C. The migration of peasants from rural manors to walled cities.
- D. The specific climate conditions of the late 14th century.

Q7. The author mentions the "Varangian Guard" primarily to:

- A. Provide an example of foreign influence within the Byzantine military.
- B. Contrast their loyalty with the treachery of local Roman generals.
- C. Argue that the Empire's defense was entirely dependent on mercenaries.
- D. Highlight the cultural exchange between Scandinavia and Constantinople.

Q8. The politician's speech was criticized for being _____, as it was filled with empty promises and lacked any substantive policy proposals.

- A. Garrulous and Loquacious
- B. Vacuous and Inane
- C. Pithy and Concise
- D. Recondite

Q9. Because the virus is so _____, scientists are having a difficult time developing a vaccine that remains effective against every new mutation.

- A. Innocuous
- B. Protean and Versatile
- C. Stagnant
- D. Pellucid

Q10. A study found that students who hand-wrote their notes scored 10% higher on conceptual exams than those who typed them. Which of the following, if true, most weakens the conclusion that handwriting is superior for learning?

- A. The typing group was able to record more words per minute.
- B. The handwriting group spent twice as long reviewing their notes.
- C. The exams were conducted on paper rather than on computers.
- D. Students in the typing group reported higher levels of wrist fatigue.

Q11. Choose the sentence that correctly utilizes subject-verb agreement with a collective noun:

- A. The committee has decided to postpone the vote until next Tuesday.
- B. The committee have decided to postpone the vote until next Tuesday.
- C. The committee are deciding to postpone the vote until next Tuesday.
- D. The committee were decided to postpone the vote until next Tuesday.

Q12. In the context of the essay, the word "equivocal" most nearly means:

- A. Unbiased and objective
- B. Ambiguous and open to interpretation
- C. Strongly worded and aggressive
- D. Completely certain and undeniable

SECTION III: VERBAL REASONING - PART 2

Q1. The researcher's monograph was notoriously (i) _____, delving into (ii) _____ details of medieval law that even specialists found the text (iii) _____.

- A. (i) Abstruse; (ii) Esoteric; (iii) Impenetrable
- B. (i) Lucid; (ii) Trivial; (iii) Accessible
- C. (i) Abstruse; (ii) Commonplace; (iii) Invigorating
- D. (i) Shallow; (ii) Esoteric; (iii) Impenetrable

Q2. The CEO's directive was intended to be (i) _____, but the (ii) _____ instructions provided by the regional managers led to widespread confusion among the staff.

- A. (i) Ambiguous; (ii) Detailed
- B. (i) Perspicuous; (ii) Opaque

C. (i) Perspicuous; (ii) Explicit

D. (i) Tentative; (ii) Lucid

Q3. To the untrained eye, the artist's late works seemed (i) _____, but critics recognized them as a (ii) _____ attempt to strip away unnecessary ornamentation.

A. (i) Sophisticated; (ii) Feeble

B. (i) Haphazard; (ii) Deliberate

C. (i) Haphazard; (ii) Spontaneous

D. (i) Detailed; (ii) Deliberate

Q4. The explorers found the arctic terrain (i) _____, but the (ii) _____ discovery of a preserved mammoth carcass made the dangerous trek a historic success.

A. (i) Hospitable; (ii) Mundane

B. (i) Forbidding; (ii) Fortuitous

C. (i) Forbidding; (ii) Foreseeable

D. (i) Tranquil; (ii) Fortuitous

Q5. The governor's reputation for _____ was well-documented; he was known for his extreme frugality, often refusing to authorize even the most essential repairs to the capital building.

A. Magnanimity

B. Parsimony

C. Alacrity

D. Venality

Q6. The legal document was so _____ that it required a team of three specialized attorneys just to summarize its primary clauses.

A. Arcane

B. Pellucid

C. Succinct

D. Manifest

Q7. According to the passage, the primary cause of the "Megafaunal Extinction" at the end of the Pleistocene epoch was:

A. A sudden decrease in global volcanic activity.

- B. A combination of rapid climate change and human hunting pressure.
- C. The lack of genetic diversity among large herbivore populations.
- D. A massive asteroid impact in the Northern Hemisphere.

Q8. The author refers to the extinction of the woolly mammoth as a "biological cautionary tale" to suggest that:

- A. Species with specialized diets are more resilient to change.
- B. Even the most dominant species are vulnerable to environmental shifts.
- C. Human intervention is always the sole cause of extinction.
- D. The fossil record is often misleading regarding population sizes.

Q9. Which of the following best expresses the "ecological ripple effect" mentioned in the passage?

- A. The extinction of large predators led to an overpopulation of prey species.
- B. The loss of giant herbivores fundamentally altered the vegetation patterns of the tundra.
- C. Climate change affected small insects more than it affected large mammals.
- D. The freezing of the oceans led to a migration of land animals to the equator.

Q10. A study shows that employees who take a 20-minute midday nap are more productive. However, the study also found that these employees tended to stay at the office an hour later than those who did not nap. Which weakens the argument that napping causes the increase in productivity?

- A. Napping has been shown to improve mood and cognitive function.
- B. The extra hour of work time accounts for the higher total daily output.
- C. Many successful CEOs report taking short naps during the workday.
- D. The study was conducted across various industries and job types.

Q11. The politician was known for being _____, constantly praising his superiors in hopes of securing a higher appointment.

- A. Obsequious and Sycophantic
- B. Assertive and Bold
- C. Aloof and Detached
- D. Candid and Frank

Q12. The professor's writing style was _____, moving directly to the point without any unnecessary flourishes or digressions.

- A. Pithy and Concise
- B. Verbose and Prolix
- C. Circuitous
- D. Florid

Q13. The economic forecast remained _____, as both inflation and unemployment showed no signs of decreasing in the coming months.

- A. Grim and Somber
- B. Sanguine and Optimistic
- C. Ambiguous
- D. Propitious

Q14. The clay used by the indigenous potters was remarkably _____, allowing them to create intricate shapes that would be impossible with coarser materials.

- A. Malleable and Plastic
- B. Brittle and Frangible
- C. Rigid
- D. Adamant

Q15. The new law was _____ in its scope, affecting every sector of the economy from agriculture to high-tech manufacturing.

- A. Comprehensive and All-encompassing
- B. Parochial and Limited
- C. Specific
- D. Ambivalent

SECTION IV: QUANTITATIVE REASONING - PART 1

Q1. The price of a laptop was increased by 25%, and then the new price was decreased by 20%.

Quantity A	Quantity B
The final price of the laptop	The original price of the laptop

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

Q2. The product of two consecutive positive even integers is 288. What is the sum of these two integers?

- A. 30
- B. 34
- C. 38
- D. 42
- E. 46

Q3. The area of a circle C is 25π .

Quantity A	Quantity B
The circumference of circle C	10π

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

Q4. x is a negative integer and y is an even positive integer.

Quantity A	Quantity B
x^y	0

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

Q5. If $5x - 3 = 2x + 18$, then $x^2 - 10 =$

- A. 15
- B. 26

C. 39

D. 49

E. 64

Q6. In a sequence of 8 consecutive integers, the sum of the first 4 integers is 30. What is the sum of the last 4 integers in this sequence?

A. 38

B. 42

C. 46

D. 50

E. 54

Q7. A box contains 4 yellow marbles, 6 black marbles, and 2 white marbles. If one marble is chosen at random, what is the probability that the marble is NOT black?

A. $\frac{1}{6}$

B. $\frac{1}{3}$

C. $\frac{1}{2}$

D. $\frac{2}{3}$

E. $\frac{5}{6}$

Q8. A rectangular rug has a perimeter of 60 inches. If the width of the rug is 10 inches, what is the area of the rug in square inches?

A. 100

B. 150

C. 200

D. 250

E. 300

Q9. If n is an integer and n^3 is a multiple of 16, which of the following must be true? (Select all that apply)

☐ n is a multiple of 4

☐ n is an even integer

☐ n^2 is a multiple of 16

Q10. A cyclist travels 15 kilometers in 45 minutes. What was the cyclist's average speed in kilometers per hour?

Q11. If $3^{x+1} = 243$, then $2^{x-2} =$

- A. 1
- B. 2
- C. 4
- D. 8
- E. 16

Q12. The average (arithmetic mean) of four numbers is 15. If a fifth number, 40, is added to the set, what is the average of the five numbers?

SECTION V: QUANTITATIVE REASONING - PART 2

Q1. $x > y > 0$.

Quantity A	Quantity B
$\frac{x}{y}$	$\frac{x+1}{y+1}$

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

Q2. p is a prime number such that $p > 3$.

Quantity A	Quantity B
The remainder when p^2 is divided by 3	1

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

Q3. x is any real number.

Quantity A	Quantity B
The standard deviation of $\{x, x + 2, x + 4\}$	The standard deviation of $\{x, x + 10, x + 20\}$

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

Q4. If A is 25% of B and B is 40% of C , what percent of C is A ?

- A. 5%
- B. 10%
- C. 15%
- D. 30%
- E. 65%

Q5. One machine can produce 50 units in 5 hours. How many units can 2 identical machines produce in 3 hours working together?

- A. 20
- B. 30
- C. 40
- D. 60
- E. 80

Data Interpretation: Sales Performance of Store Y (Q1-Q4)

Quarter	Online Sales (\$)	In-Store Sales (\$)
Q1	120,000	180,000
Q2	150,000	150,000
Q3	200,000	120,000
Q4	250,000	150,000

Q6. What was the percent increase in Online Sales from Q1 to Q2?

- A. 20%

- B. 25%
- C. 30%
- D. 33%
- E. 40%

Q7. In Q3, Online Sales accounted for what percent of the total sales for that quarter?

- A. 40%
- B. 50%
- C. 60%
- D. 62.5%
- E. 75%

Q8. What was the total In-Store Sales, in dollars, for the entire year?

Q9. A right triangle has a hypotenuse of length 10. If one of the legs has a length of 6, what is the area of the triangle?

- A. 24
- B. 30
- C. 48
- D. 60
- E. 80

Q10. If $x \neq 0$, then $\frac{(3x^3)^2}{x^2} = mx^n$. What is the value of $m + n$?

Q11. At a grocery store, apples cost \$2.00 each and oranges cost \$3.00 each. If David spends exactly \$25.00 on a mix of apples and oranges, which of the following could be the number of oranges he bought?

- A. 2
- B. 3
- C. 5
- D. 6
- E. 8

Q12. Line K passes through the points $(1, 1)$ and $(3, 5)$. Line N is perpendicular to Line K .

Quantity A	Quantity B
The slope of Line N	-0.5

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

Q13. How many positive three-digit integers are multiples of both 5 and 10?

- A. 45
- B. 50
- C. 90
- D. 100
- E. 110

Q14. If $g(x) = (x - 3)^2$, for what value of x is $g(x) = g(6 - x)$?

- A. No values of x
- B. Only $x = 0$
- C. Only $x = 3$
- D. Only $x = 6$
- E. All values of x

Q15. In a group of 100 people, 60 play guitar, 40 play piano, and 20 play both. How many people in the group play neither instrument?

Solutions - Verbal Reasoning Section I

1. **(B)** The sentence establishes a contrast using "although." While previous designs were "ornate and baroque" (highly decorated), this structure is "stark" and has a "total lack of embellishment." "Austere" is the correct term for a style that is plain and unadorned.
2. **(C)** Despite "scathing reviews," the director refused to change his stance and "steadfastly" defended his choices. "Obdurate" means stubbornly refusing to change one's opinion or course of action, which perfectly matches the context.
3. **(A)** For blank (i), "capricious" fits because it describes someone given to sudden and unaccountable changes of mood or behavior ("on a whim"). For blank (ii), the inability to predict the future direction is best described as an inability to "forecast."
4. **(C)** For blank (i), "comprehensive" matches the "mountain of data." For blank (ii), "arcane" means understood by few or mysterious, which explains why only a "handful of specialists" could comprehend the findings.
5. **(B)** In GRE reading passages, traditional narratives are often critiqued for lack of scope. If the Eastern provinces were resilient while the West fell, a narrative focusing only on decline fails to account for that resilience.
6. **(B)** The Black Death spread primarily through maritime and overland commerce. The "increased frequency of trade routes" is the historical factor most responsible for the rapid urban transmission described.
7. **(A)** The Varangian Guard consisted of Norsemen/Scandinavians serving the Byzantine Emperor. They are mentioned as a clear "example of foreign influence" within the military structure of the Empire.
8. **(B)** In Sentence Equivalence, the words must create synonyms. A speech with "empty promises" and no "substance" is both "vacuous" and "inane," as both words mean lacking significance, ideas, or content.
9. **(B)** "Protean" and "versatile" both describe something that is able to change frequently or easily. Because the virus mutation is constant, its ability to change shape/nature makes it difficult to target with a single vaccine.
10. **(B)** The conclusion is that the act of handwriting improves learning. However, if the handwriting group "spent twice as long" reviewing, then the time spent is a confounding variable that weakens the claim that the writing method itself was the cause.
11. **(A)** With collective nouns like "committee," if the group is acting as a single, unanimous unit, the singular verb ("has decided") is grammatically correct in standard American English.
12. **(B)** "Equivocal" describes language that is open to more than one interpretation and is often used to mislead; therefore, "ambiguous" is the closest synonym.

Solutions - Verbal Reasoning Section II

1. **(A)** For blank (i), "abstruse" means difficult to understand. For blank (ii), "esoteric" describes specialized knowledge intended for a small group. For blank (iii), if specialists find it hard, the text is "impenetrable."
2. **(B)** The contrast word "but" indicates the directive was intended to be "perspicuous" (clearly expressed), but the resulting instructions were "opaque" (hard to understand/not transparent).
3. **(B)** To the "untrained eye," the work looks "haphazard" (random). However, the contrast with "critics" suggests the lack of ornamentation was actually "deliberate" (intentional).
4. **(B)** The ascent was "forbidding" (fear-inspiring/difficult), but the discovery was "fortuitous" (happening by a lucky chance), leading to a historic success.
5. **(B)** "Extreme frugality" and the refusal to spend money even on essentials is the definition of "parsimony."
6. **(A)** A document that is so specialized or obscure that even experts struggle to summarize it is "arcane."
7. **(B)** The passage regarding the Pleistocene extinction typically balances environmental shifts (climate change) and anthropogenic factors (human hunting).
8. **(B)** A "cautionary tale" in this context suggests that size and dominance do not equate to invulnerability; even "dominant species" can be destroyed by environmental shifts.
9. **(B)** The "ripple effect" refers to how the removal of one key component (giant herbivores) causes a series of changes throughout the environment, such as altering vegetation.
10. **(B)** The argument is that napping increases productivity. If those employees stayed "an hour later," the higher productivity is likely due to the extra hour of work time rather than the biological effect of the nap.
11. **(A)** "Obsequious" and "sycophantic" are perfect synonyms for someone who acts in an excessively attentive or fawning way to win favor with superiors.
12. **(A)** A style that is "directly to the point" and lacks "unnecessary flourishes" is both "pithy" and "concise."
13. **(A)** Given the negative indicators (inflation/unemployment), the forecast is "grim" and "somber."
14. **(A)** "Malleable" and "plastic" are synonyms in a technical context meaning easily influenced, trained, or controlled; able to be molded.
15. **(A)** A law that affects "every sector" of the economy is "comprehensive" and "all-encompassing."

Solutions - Quantitative Reasoning Section I

1. **(C)** Let the original price be 100. Increase by 25% $\rightarrow$ 125. Decrease the new price (125) by 20%: $125 - 0.20(125) = 125 - 25 = 100$. Since the final price equals the original price, the quantities are equal.
2. **(34)** Let the integers be n and $n + 2$. $n(n + 2) = 288 \Rightarrow n^2 + 2n - 288 = 0$. Factoring gives $(n + 18)(n - 16) = 0$. Since they are positive, $n = 16$. The integers are 16 and 18. Sum = $16 + 18 = 34$.
3. **(C)** Area $\pi r^2 = 25\pi \Rightarrow r^2 = 25 \Rightarrow r = 5$. Circumference = $2\pi r = 2\pi(5) = 10\pi$. The quantities are equal.
4. **(A)** A negative integer raised to an even positive power is always positive. Since any positive number is greater than 0, Quantity A is greater.
5. **(39)** $5x - 3 = 2x + 18 \Rightarrow 3x = 21 \Rightarrow x = 7$. Then, $x^2 - 10 = 7^2 - 10 = 49 - 10 = 39$.
6. **(46)** Let the first 4 integers be $n, n + 1, n + 2, n + 3$. Sum = $4n + 6 = 30 \Rightarrow 4n = 24 \Rightarrow n = 6$. The sequence is 6, 7, 8, 9, 10, 11, 12, 13. Sum of the last four: $10 + 11 + 12 + 13 = 46$.
7. **(C)** Total marbles = $4 + 6 + 2 = 12$. Black marbles = 6. Marbles that are NOT black = $12 - 6 = 6$. Probability = $6/12 = 1/2$.
8. **(200)** Perimeter $2(L + W) = 60 \Rightarrow L + 10 = 30 \Rightarrow L = 20$. Area = $L \times W = 20 \times 10 = 200$.
9. **(A, B, C)** If n^3 is a multiple of $16(2^4)$, n must contain 2^2 in its prime factorization to ensure n^3 has at least 2^4 . Thus n is a multiple of 4, which makes it even. If n is a multiple of 4 ($n = 4k$), then $n^2 = 16k^2$, which is a multiple of 16.
10. **20** Time = $45/60 = 0.75$ hours. Speed = Distance/Time = $15/0.75 = 20$ km/h.
11. **(4)** $3^{x+1} = 243 \Rightarrow 3^{x+1} = 3^5 \Rightarrow x + 1 = 5 \Rightarrow x = 4$. Then $2^{x-2} = 2^{4-2} = 2^2 = 4$.
12. **20** Sum of 4 numbers = $15 \times 4 = 60$. New sum = $60 + 40 = 100$. New average = $100/5 = 20$.

Solutions - Quantitative Reasoning Section II

1. **(A)** For any $x > y > 0$, adding 1 to both the numerator and denominator of a fraction x/y where the fraction is greater than 1 results in a value closer to 1 (smaller). Thus $x/y > (x+1)/(y+1)$.
2. **(C)** Any prime $p > 3$ can be written as $3k \pm 1$. Thus $p^2 = (3k \pm 1)^2 = 9k^2 \pm 6k + 1$. When divided by 3, the remainder is always 1.
3. **(B)** Standard deviation measures spread. The values in Quantity A are separated by 2 units, while the values in Quantity B are separated by 10 units. Therefore, the spread in Quantity B is greater.
4. **(B)** $A = 0.25B$ and $B = 0.40C$. Substitute B : $A = 0.25(0.40C) = 0.10C$. This is 10% of C .
5. **(60)** One machine rate = 50 units/5 hours = 10 units/hr. Two machines rate = 20 units/hr. In 3 hours: $20 \times 3 = 60$ units.
6. **(B)** Online Sales: $Q1 = 120k$, $Q2 = 150k$. % Increase = $(150-120)/120 = 30/120 = 25\%$.
7. **(D)** $Q3$ Total Sales = $200,000 + 120,000 = 320,000$. Online % = $200,000/320,000 = 20/32 = 5/8 = 62.5\%$.
8. **600,000** Total In-Store = $180,000 + 150,000 + 120,000 + 150,000 = 600,000$.
9. **(24)** Missing leg $b = \sqrt{10^2 - 6^2} = \sqrt{64} = 8$. Area = $0.5 \times 6 \times 8 = 24$.
10. **13** $\frac{(3x^3)^2}{x^2} = \frac{9x^6}{x^2} = 9x^4$. Here $m = 9$ and $n = 4$. $m + n = 13$.
11. **(3, 5)** Equation: $2A + 3O = 25$. If $O = 3$: $2A + 9 = 25 \Rightarrow 2A = 16 \Rightarrow A = 8$. If $O = 5$: $2A + 15 = 25 \Rightarrow 2A = 10 \Rightarrow A = 5$. Both are valid integer solutions.
12. **(C)** Slope of $K = (5-1)/(3-1) = 4/2 = 2$. Perpendicular slope $N = -1/2 = -0.5$. The quantities are equal.
13. **(90)** Multiples of 5 and 10 must be multiples of 10. Smallest 3-digit: 100. Largest: 990. Count = $(990 - 100)/10 + 1 = 90$.
14. **(E)** $g(6-x) = ((6-x)-3)^2 = (3-x)^2$. Since $(x-3)^2$ is always equal to $(3-x)^2$, the equation holds for all values of x .
15. **20** Students playing at least one instrument: $60 + 40 - 20 = 80$. Neither = $100 - 80 = 20$.