GRE Quantitative Reasoning Practice Test-3, 2024 with Solutions

Time Allowed : 1 Hour 58 Minutes	**Maximum Marks :** 340

General Instructions

Read the following instructions very carefully and strictly follow them:

1. There is no penalty for incorrect answers on the Verbal Reasoning and Quantitative Reasoning sections. This means you should always answer every question, even if you have to guess.
2. Within any section of the test, you can mark questions you want to review and change your answers as long as the time for that section has not expired.
3. The Analytical Writing section is always presented first. The Verbal Reasoning and Quantitative Reasoning sections may appear in any order after the essay.
4. The test is taken on a computer, and test-takers are provided with scratch paper or a small whiteboard for notes.
5. The Quantitative Reasoning section includes an on-screen calculator.
6. There are no breaks during the test. Leaving your seat at any point will not stop the timer for the current section.

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1. If $\frac{2}{3}x - 5 = \frac{1}{3}x + 7$, what is the value of x?

(A) 12
(B) 24
(C) 36
(D) 42

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2. The average (arithmetic mean) of five numbers is 14. If four of the numbers are 10, 12, 18, and 20, what is the fifth number? Options (A) 8
(B) 10
(C) 12
(D) 14

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3. If a car travels at an average speed of 55 miles per hour for the first 2 hours and 65 miles per hour for the next 3 hours, what is the total distance traveled? Options
(A) 250 miles
(B) 275 miles
(C) 300 miles
(D) 305 miles

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4. Simplify the expression $\frac{5x}{2x} + \frac{3}{2x}$. Options (A) $\frac{8x}{2x}$
(B) $\frac{13}{2x}$
(C) $\frac{15x}{2x}$
(D) $\frac{13x}{2x}$

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5. Solve for y: $4y - 3(2y + 1) = 5$. Options (A) $y = 4$
(B) $y = -4$
(C) $y = 2$
(D) $y = -2$

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6. If $f(x) = 2x^2 - 3x + 1$, find $f(-1)$. Options (A) 4
(B) 5
(C) 6
(D) 7

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7. Expand the expression $(2x - 3)(x + 4)$. Options (A) $2x^2 + 8x - 3$
(B) $2x^2 + 5x - 12$
(C) $2x^2 - 5x - 12$
(D) $2x^2 + 12x - 3$

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8. If $x^2 - 5x + 6 = 0$, what are the possible values of x? Options (A) $x = 1$ or $x = 6$
(B) $x = 2$ or $x = 3$
(C) $x = -2$ or $x = -3$
(D) $x = -1$ or $x = 6$

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9. What is the area of a trapezoid with bases of lengths 6 cm and 10 cm, and a height of 5 cm? Options (A) 30 cm^2
(B) 35 cm^2
(C) 40 cm^2
(D) 50 cm^2

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10. What is the volume of a cone with a radius of 3 cm and a height of 4 cm? (Use $\pi \approx 3.14$) Options (A) 28.26 cm^3
(B) 37.68 cm^3
(C) 40.20 cm^3
(D) 45.12 cm^3

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11. Find the length of the diagonal of a rectangle with length 8 cm and width 6 cm. Options (A) 8 cm
(B) 9 cm
(C) 10 cm

(D) 12 cm

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12. What is the surface area of a sphere with a radius of 5 cm? (Use $\pi \approx 3.14$) Options (A) 125 cm^2
(B) 200 cm^2
(C) 314 cm^2
(D) 350 cm^2

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13. A dataset contains the numbers 5, 7, 9, 11, 13, and 15. What is the standard deviation? Options (A) 2.58
(B) 3.74
(C) 4.20
(D) 5.00

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14. A survey of 300 people found that 180 like coffee, 120 like tea, and 90 like both. How many people like only coffee? Options (A) 60
(B) 90
(C) 120
(D) 210

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15. A pie chart shows the distribution of expenses for a household: 25% for housing, 15% for food, 20% for transportation, and the rest for other expenses. What percentage is spent on other expenses? Options (A) 35%
(B) 40%
(C) 45%
(D) 50%

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16. A company's revenue increased from $200,000 in 2019 to $250,000 in 2020. What is the percentage increase? Options (A) 20%
(B) 22.5%
(C) 25%
(D) 30%

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17. Simplify the expression: $\frac{3x-4}{x} + \frac{2x+5}{x}$. Options (A) $\frac{5x+1}{x}$
(B) $5 + \frac{1}{x}$
(C) $\frac{5}{x} + 1$
(D) $\frac{1}{x} - 5$

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18. If x is inversely proportional to y and $x = 10$ when $y = 2$, what is x when $y = 8$? Options (A) 1.5
(B) 2
(C) 2.5

(D) 4

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19. If $4x + 7 = 3x + 12$, what is the value of x? Options (A) 3
(B) 4
(C) 5
(D) 6

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20. A right triangle has one leg of 8 cm and a hypotenuse of 17 cm. What is the length of the other leg? Options (A) 12 cm
(B) 13 cm
(C) 15 cm
(D) 16 cm