GRE 2024 Quant Practice Test 3

Time Allowed :	Maximum Score :	Sections :
About 3 hrs 45 mins	340 (Verbal+Quant) + 6 (AWA)	3 Main + 1 Unscored

General Instructions

Read the following instructions very carefully and strictly follow them:

1. The GRE General Test has a duration of about 3 hours 45 minutes, divided into six sections (including one unscored/experimental section).
2. The test consists of the following sections:
   - **Analytical Writing Assessment (AWA)** – 2 tasks, 30 minutes each.
   - **Verbal Reasoning** – 2 sections, 20 questions each, 30 minutes per section.
   - **Quantitative Reasoning** – 2 sections, 20 questions each, 35 minutes per section.
   - **Unscored/Research Section** – May appear anytime (not counted in score).
3. Scoring Pattern:
   - Verbal Reasoning: 130–170 (in 1-point increments).
   - Quantitative Reasoning: 130–170 (in 1-point increments).
   - Analytical Writing: 0–6 (in half-point increments).
4. No negative marking is applied in the GRE. Test-takers are advised to attempt all questions.
5. Only an on-screen calculator is allowed for Quantitative Reasoning. No physical calculators, mobile devices, or electronic gadgets are permitted.
6. Breaks: A 10-minute break is provided after the third section; one-minute breaks between other sections.

QUANT PRACTICE PAPER

1. Reduce the following fraction:

$$\frac{a^2b^2+c^2}{5ab^2} \div \frac{5ab+c}{5c}$$

(A) $\frac{bc(ab+c)}{5a}$
(B) $\frac{ac(ab+c)}{5b}$

(C) $\frac{ah(ab+c)}{5c}$
(D) $\frac{5abh(ab+c)}{c}$

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2. If $x = 55$, $x + y = 23$, and $y - x = 2$, find the value of $2x + y$.

(A) 16
(B) 17
(C) 15
(D) 9
(E) 5

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3. Which of the following are answers to the equation below?

$$x^2 - 4 = 0, \quad x^2 + 5x + 6 = 0$$

I. $x = 2$
II. $x = -2$
III. $x = -3$

(A) I and III
(B) II and III
(C) I, II, and III
(D) I only
(E) II only

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4. Find the relationship between Quantity A and Quantity B:

$$(a + b)^2 = 34, \quad \frac{ab}{2} = 6$$

Quantity A: $a^2 + b^2$
Quantity B: 11

(A) The two quantities are equal.
(B) Quantity A is greater.
(C) Quantity B is greater.
(D) The relationship cannot be determined.

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5. The arithmetic mean of a, b, c, d is 14.
Quantity A: 32
Quantity B: The arithmetic mean of $a+b$, $c+d$, and $a-b+c-d=48$

(A) Quantity A and Quantity B are equal.
(B) Quantity A is greater.
(C) Quantity B is greater.
(D) The relationship between Quantity A and Quantity B cannot be determined.

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6. Compare Quantity A and Quantity B:

$$\text{Quantity A: } (x+y)^3, \quad \text{Quantity B: } x^3+y^3$$

Given that $x<0$ and $y>0$, compare the two quantities.

(A) The relationship cannot be determined.
(B) The two quantities are equal.
(C) Quantity B is greater.
(D) Quantity A is greater.

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7. Compare Quantity A and Quantity B:

$$\text{Quantity A: } (x+y)^3, \quad \text{Quantity B: } x^3+y^3$$

Given that $x<0$ and $y>0$, compare the two quantities.

(A) The relationship cannot be determined.
(B) The two quantities are equal.
(C) Quantity B is greater.
(D) Quantity A is greater.

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8. Find the algebraic expression to represent the following statement:
The square of x multiplied by 3, the result has 18 subtracted from it and the final result divided by 15.

(A) $\frac{3x^2-18}{15}$
(B) $\frac{(3x^2)-18}{15}$
(C) $\frac{3(x^2-18)}{15}$
(D) $\frac{(3x^2-18)^2}{15}$

(E) $\frac{3x^2}{15} - 18$

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9. Compare Quantity A and Quantity B and determine which is larger.

$$\text{Quantity A: } x^3 - 6, \quad \text{Quantity B: } x + 1$$

For when $x < 2$, compare the two quantities.

(A) Quantity A is larger.
(B) The two quantities are equal.
(C) Quantity B is larger.
(D) Can't be determined from the information provided.

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10. How many real solutions are there for the following equation?

$$x^4 + 5x^2 - 14 = 0$$

(A) 1
(B) 0
(C) 4
(D) 2

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11. Simplify the following expression:

$$3\sqrt{27} + 5\sqrt{18} - 3\sqrt{147}$$

(A) $8\sqrt{3}$
(B) $5\sqrt{72}$
(C) $5\sqrt{3}$
(D) $2\sqrt{76}$
(E) Cannot be simplified further

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12. Simplify the following expression:

$$0.327 + \left(\frac{3}{8} \times (0.048 + 2.176)\right)$$

(A) 0.0532
(B) 1.242
(C) 0.793
(D) 1.522

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13. Which of the following is true?

$$\text{Quantity A: } \frac{12}{11} \div \frac{7}{6}, \quad \text{Quantity B: } \frac{17}{8} \div \frac{7}{6}$$

(A) The relationship between the quantities cannot be determined.
(B) Quantity B is larger.
(C) The two quantities are equal.
(D) Quantity A is larger.

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14. If the product of two distinct integers is 143, which of the following could not represent the sum of those two integers?

(A) 144
(B) -144
(C) 24
(D) -24
(E) 11

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15. A cake order cost $45.40 before tax. If the tax rate is 6.5%, what is the price of the cake after tax is applied?

(A) $48.99
(B) $5.34
(C) $49.42
(D) $48.35
(E) $2.95

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16. At an overpriced department store there are 112 customers. If 43 have purchased shirts, 57 have purchased pants, and 38 have purchased neither, how many purchased both shirts and pants?

(A) 74
(B) 26
(C) 38
(D) 14
(E) The answer cannot be determined.

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17. The arithmetic mean of $a, b,$ and c is 13.
Quantity A: The arithmetic mean of $2a + b, b + 3c, 39 - c$
Quantity B: 39

(A) The two quantities are equal.
(B) Quantity B is greater.
(C) The relationship cannot be established.
(D) Quantity A is greater.

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18. A boy with a lemonade stand sells cups of lemonade for a quarter each. He has bought \$20 worth of supplies and is able to make 500 cups of lemonade with the supplies. If he has to pay a business tax of 4% for each cup he sells, how many cups will he have to sell in order to break even?

(A) 83.2 cups
(B) 84 cups
(C) 83 cups
(D) It is impossible for him to profit from this business venture.
(E) 92 cups

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19. The average of five consecutive integers is 6. What is the largest of these integers?

(A) 7
(B) 6
(C) 12
(D) 8
(E) 10

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20. Simplify:

$$\frac{1}{2} + \frac{x}{4}$$

(A) $1 + \frac{x}{16}$
(B) $\frac{3x+4}{8}$
(C) $x + \frac{6}{32}$
(D) $x + \frac{12}{3}$
(E) $1 + \frac{x}{4}$
