GRE 2025 Quant Sample Paper Set 1

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.

Quantitative Reasoning

Directions: For each question, indicate the best answer using the directions given.

Notes: All numbers used are real numbers.

All figures are assumed to lie in a plane unless otherwise indicated.

Geometric figures, such as lines, circles, triangles, and quadrilaterals, **are not necessarily** drawn to scale. That is, you should **not** assume that quantities such as lengths and angle measures are as they appear in a figure. You should assume, however, that lines shown as straight are actually straight, points on a line are in the order shown, and more generally, all

geometric objects are in the relative positions shown. For questions with geometric figures, you should base your answers on geometric reasoning, not on estimating or comparing quantities from how they are drawn in the geometric figure.

Coordinate systems, such as xy-planes and number lines, **are drawn to scale**; therefore, you can read, estimate, or compare quantities in such figures from how they are drawn in the coordinate system.

Graphical data presentations, such as bar graphs, circle graphs, and line graphs, **are drawn to scale**; therefore, you can read, estimate, or compare data values from how they are drawn in the graphical data presentation.

For each of Questions 1–9, compare Quantity A and Quantity B, using additional information centered above the two quantities if such information is given. Select one of the following four answer choices. A symbol that appears more than once in a question has the same meaning throughout the question.

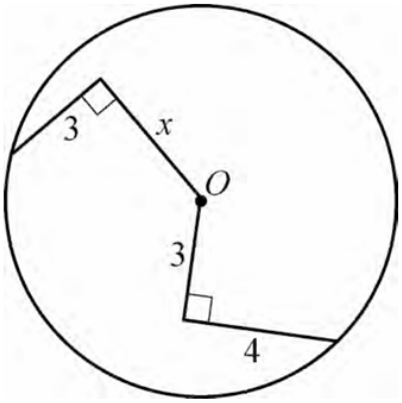
(A) Quantity A is greater.

(B) Quantity B is greater.

(C) The two quantities are equal.

(D) The relationship cannot be determined from the information given.

1. O is the center of the circle above.



(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.

2. Runner A ran 4/5 kilometer and Runner B ran 800 meters.
The distance that Runner A ran
The distance that Runner B ran

(1) Quantity A is greater
(2) Quantity B is greater
(3) The two quantities are equal
(4) The relationship cannot be determined from the information given.

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3. Given $x < y < z$, compare the following quantities:

$$\frac{x+y+z}{3} \quad \text{and} \quad y$$

(1) Quantity A is greater
(2) Quantity B is greater
(3) The two quantities are equal
(4) The relationship cannot be determined from the information given.

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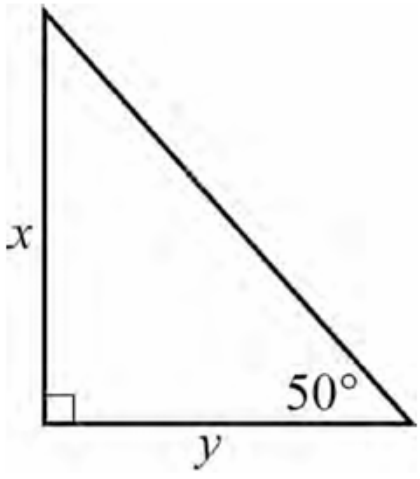
4. Given the triangle with angles of $40°$, $50°$, and $90°$, compare the legs of this triangle to those of a $45°$-$45°$-$90°$ triangle.



(1) Quantity A is greater
(2) Quantity B is greater
(3) The two quantities are equal
(4) The relationship cannot be determined from the information given.

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5. Given that $0 < x < y < 1$, compare the following quantities:

$$1 - y \quad \text{and} \quad y - x$$

(1) Quantity A is greater
(2) Quantity B is greater
(3) The two quantities are equal
(4) The relationship cannot be determined from the information given.

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6. In this question, p is the probability that event E will occur, and s is the probability that event E will not occur. Compare the following quantities:

$$p + s \quad \text{and} \quad ps$$

(1) Quantity A is greater
(2) Quantity B is greater
(3) The two quantities are equal
(4) The relationship cannot be determined from the information given.

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7. Given that X is the set of all integers n that satisfy the inequality $2 \leq |n| \leq 5$, compare the following quantities:

The absolute value of the greatest integer in X and The absolute value of the least integer in X

(1) Quantity A is greater
(2) Quantity B is greater
(3) The two quantities are equal
(4) The relationship cannot be determined from the information given.

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8. Given that x and m are positive numbers, and m is a multiple of 3, compare the following quantities:

$$\frac{x^m}{x^3} \quad \text{and} \quad \frac{m}{x^3}$$

(1) Quantity A is greater
(2) Quantity B is greater
(3) The two quantities are equal

(4) The relationship cannot be determined from the information given.

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9. A random variable Y is normally distributed with a mean of 200 and a standard deviation of 10. Compare the following quantities:

The probability of the event that the value of Y is greater than 220 and $\frac{1}{6}$

(1) Quantity A is greater
(2) Quantity B is greater
(3) The two quantities are equal
(4) The relationship cannot be determined from the information given.

Questions 10–25 have several different formats, including both selecting answers from a list of answer choices and numeric entry. With each question, answer format instructions will be given.

Numeric-Entry Questions

These questions require a number to be entered by circling entries in a grid. If you are not entering in your own answers, your scribe should be familiar with these instructions.

1. Your answer may be an integer, a decimal, or a fraction, and it may be negative.
2. Equivalent forms of the correct answer, such as 2.5 and 2.50, are all correct. Although fractions do not need to be reduced to lowest terms, they may need to be reduced to fit in the grid.
3. Enter the exact answer unless the question asks you to round your answer.
4. If a question asks for a fraction, the grid will have a built-in division slash (/). Otherwise, the grid will have a decimal point.
5. Start your answer in any column, space permitting. Circle no more than one entry in any column of the grid. Columns not needed should be left blank.
6. Write your answer in the boxes at the top of the grid and circle the corresponding entries. You will receive credit only if your grid entries are clearly marked, regardless of the number written in the boxes at the top.

Examples of acceptable ways to use the grid: Integer answer: 502 (either position is correct)

-	**.**	**.**	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1
2	2	2	**2**	2	2	2	2	3	3	3
4	4	4	4	4	**5**	5	5	5	6	6
6	6	6	6	6	7	7	7	7	8	8
8	8	8	8	8	9	9	9	9	9	9

Examples of acceptable ways to use the grid: Integer answer: 502 (either position is correct)

-	**.**	**.**	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	
2	2	2	**2**	2	2	2	2	3	
4	4	4	4	**5**	5	5	5	6	
6	6	6	6	6	7	7	7	8	
8	8	8	8	9	9	9	9	9	

Decimal answer: -4.13

-	**.**	**.**	**.**	**●**	**.**	**.**			
0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	**1**	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	**3**	3	3	3	3
4	4	4	**4**	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

Fraction answer: $\frac{-2}{10}$

-	**2**	**/**	**1**	**0**	0	0	0	0	0
1	1	1	1	**1**	1	1	1	1	
2	**2**	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	
7	7	7	7	7	7	7	7	7	
8	8	8	8	8	8	8	8	8	
9	9	9	9	9	9	9	9	9	

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10. The ratio of $\frac{1}{3}$ to $\frac{3}{8}$ is equal to the ratio of

(A) 1 to 8
(B) 8 to 1
(C) 8 to 3
(D) 8 to 9
(E) 9 to 8

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11. A reading list for a humanities course consists of 10 books, of which 4 are biographies and the rest are novels. Each student is required to read a selection of 4 books from the list, including 2 or more biographies. How many selections of 4 books satisfy the requirements?

(A) 90
(B) 115
(C) 130
(D) 144
(E) 195

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12. In a graduating class of 236 students, 142 took algebra and 121 took chemistry. What is the greatest possible number of students that could have taken both algebra and chemistry?
Fraction answer:

-	.	.	.	.	.	.			
0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

(A) 10
(B) 15
(C) 20
(D) 30

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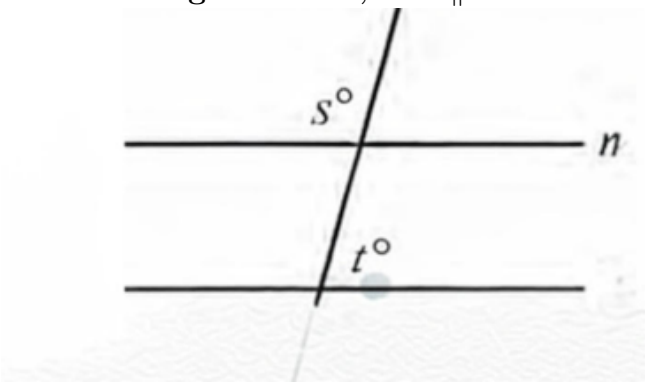
13. In the figure above, if $m \parallel k$ and $s = t + 30$, then $t = \ldots$



(A) 30
(B) 60
(C) 75
(D) 80
(E) 105

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14. If $2x = 3y = 4z = 20$, then $12xyz = \ldots$

(A) 16,000
(B) 8,000
(C) 4,000
(D) 800
(E) 10

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15. The total amount that Mary paid for a book was equal to the price of the book plus a sales tax that was 4 percent of the price of the book. Mary paid for the book with a 10 bill and received the correct change, which was less than $3.00. Which of the following statements must be true?

(A) The price of the book was less than $9.50.
(B) The price of the book was greater than $6.90.
(C) The sales tax was less than $0.45.
(D) 3600

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16. If $\frac{1}{(2^{11})(5^{17})}$ is expressed as a terminating decimal, how many nonzero digits will the decimal have?

(A) One
(B) Two

(C) Four
(D) Six
(E) Eleven

Questions 17-20 are based on the data presented on the page. In order to fit on the page, the data presentation has been turned 90 degrees.

Decaffeinated coffee: 0 mg
Percolated coffee: 95 mg
Drip-brewed coffee: 145 mg
Instant coffee: 65 mg
Brewed tea: 45 mg
Instant tea: 35 mg
Cocoa: 25 mg
Caffeinated soft drinks: 40 mg
Weight-loss drugs: 10 mg
Diuretics and stimulants: 15 mg
Pain relievers: 0 mg
Cold/allergy remedies: 10 mg

17. The least amount of caffeine in a 5-ounce cup of drip-brewed coffee exceeds the greatest amount of caffeine in a 5-ounce cup of cocoa by approximately how many milligrams?

(A) 160
(B) 80
(C) 60
(D) 40
(E) 20

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18. For how many of the 11 categories of beverages and drugs listed in the graph can the amount of caffeine in the given serving size be less than 50 milligrams?

(A) One
(B) Two
(C) Three
(D) Four
(E) Five

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19. Approximately what is the minimum amount of caffeine, in milligrams, consumed per day by a person who daily drinks two 10-ounce mugs of percolated coffee and one 12-ounce cup of a caffeinated soft drink?

(A) 230
(B) 190
(C) 140
(D) 110
(E) 70

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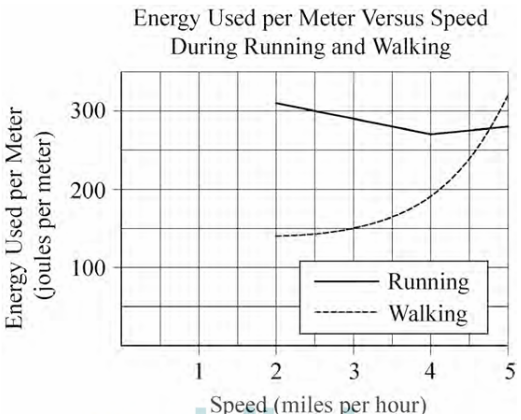
20. Which of the following shows the four types of coffee listed in order according to the range of the amounts of caffeine in a 5-ounce cup, from the least range to the greatest range?

(A) Decaffeinated, instant, percolated, drip-brewed
(B) Decaffeinated, instant, drip-brewed, percolated
(C) Instant, decaffeinated, drip-brewed, percolated
(D) Instant, drip-brewed, decaffeinated, percolated
(E) Instant, percolated, drip-brewed, decaffeinated

This question has five answer choices. Select the best one of the answer choices given.



21. If s is a speed, in miles per hour, at which the energy used per meter during running is twice the energy used per meter during walking, then according to the graph above, s is between

(A) 2.5 and 3.0
(B) 3.0 and 3.5
(C) 3.5 and 4.0

(D) 4.0 and 4.5
(E) 4.5 and 5.0

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22. If $n = 2^3$, then $n^n = \ldots$

(A) 2^6
(B) 2^{11}
(C) 2^{18}
(D) 2^{24}
(E) 2^{27}

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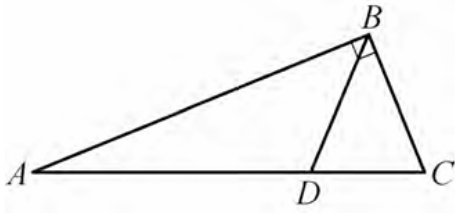
23. Which of the following statements individually provide sufficient additional information to determine the area of triangle ABC?



The length of AB is $10\sqrt{3}$.

Indicate all such statements.

(A) DBC is an equilateral triangle.
(B) ABD is an isosceles triangle.
(C) The length of BC is equal to the length of AD.
(D) The length of BC is 10.
(E) The length of AD is 10.

This question does not have any answer choices; it is a numeric entry question. To answer this question, enter a number by circling entries in the grid provided below. The number can include a decimal point, and can be positive, negative, or zero. The number entered cannot be a fraction.

$$a_1, a_2, a_3, \ldots, a_n, \ldots$$

24. In the sequence above, each term after the first term is equal to the preceding term plus the constant c. If $a_1 + a_3 + a_5 = 27$, what is the value of $a_2 + a_4$?

-	.	.	.	.	.	.
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

(A) $\frac{5}{6}$
(B) $\frac{3}{5}$
(C) $\frac{3}{4}$
(D) $\frac{2}{5}$

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25. A desert outpost has a water supply that is sufficient to last 21 days for 15 people. At the same average rate of water consumption per person, how many days would the water supply last for 9 people?

(A) 28.0
(B) 32.5
(C) 35.0
(D) 37.5
(E) 42.0
