

GRE 2024 Quant Practice Test 11

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

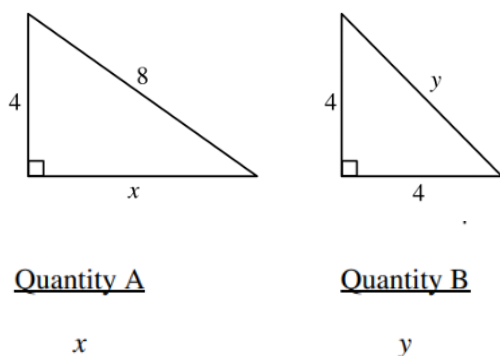
Geometric figures, such as circles, triangles, and quadrilaterals, are not necessarily drawn to scale. That is, you should not assume that quantities such as lengths and angle measures are as they appear in a figure. You should assume, however, that lines shown as straight are actually straight, points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

1. In the figure, two right-angled triangles are given. One triangle has legs of length 4 and 8, and the other has legs of length 4 and y .



- (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. The equation $(x - 2y)(x + 2y) = 4$ is given.

Quantity A	Quantity B
$x^2 - 4y^2$	8

- (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.

3. A certain recipe requires $3\frac{2}{3}$ cups of sugar and makes 2 dozen cookies. (1 dozen = 12)

Quantity A

The amount of sugar
required for the same
recipe to make 30 cookies

Quantity B

2 cups

- (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.
-

4. A power station is located on the boundary of a square region that measures 10 miles on each side. Three substations are located inside the square region.

Quantity A

The sum of the distances
from the power station to
each of the substations

Quantity B

30 miles

- (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.
-

5. Given $6 < x < 7$ and $y = 8$.

Quantity A

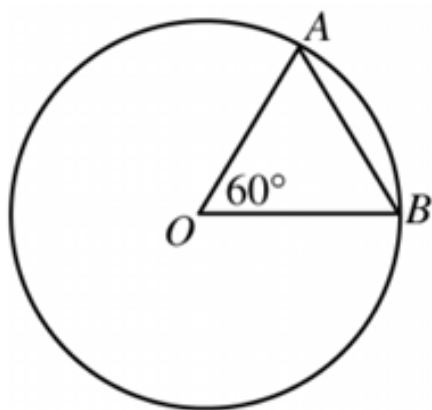
$\frac{x}{y}$

Quantity B

0.85

- (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.
-

6. O is the center of the circle and the perimeter of $\triangle AOB$ is 6.



Quantity A

The circumference of
the circle

Quantity B

12

- (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.

7. The standard deviation of a set of 5 different integers, each of which is between 0 and 10.

Quantity A

The standard deviation
of a set of 5 different
integers, each of which
is between 0 and 10

Quantity B

The standard deviation
of a set of 5 different
integers, each of which
is between 10 and 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.

8. Given $x > 1$.

Quantity A

$$x(x^2)^4$$

Quantity B

$$(x^3)^3$$

- (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.
-

9. Given $x \neq 0$.

Quantity A

$$|x| + |-2|$$

Quantity B

$$|x - 2|$$

- (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.
-

10. The system of equations is:

$$7x + 3y = 12 \quad 3x + 7y = 6$$

If x and y satisfy the system of equations, what is the value of $x - y$?

- (A) $\frac{2}{3}$
(B) $\frac{3}{2}$
(C) 1
(D) 4
(E) 6
-

11. In triangle ABC, the measure of angle A is 25° and the measure of angle B is greater than 90° . Which of the following could be the measure of angle C? Indicate all possible values.

- (A) 12°
(B) 15°
(C) 45°
(D) 50°
(E) 70°
-

12. What is the least integer n such that $2n < 1001$?

- (A) 10
 - (B) 11
 - (C) 500
 - (D) 501
 - (E) There is no such least value.
-

13. In the sunshine, an upright pole 12 feet tall is casting a shadow 8 feet long. At the same time, a nearby upright pole is casting a shadow 10 feet long. If the lengths of the shadows are proportional to the heights of the poles, what is the height, in feet, of the taller pole?

- (A) 10
 - (B) 12
 - (C) 14
 - (D) 15
 - (E) 18
-

14. If a is the smallest prime number greater than 21 and b is the largest prime number less than 16, then $ab = ?$

- (A) 299
 - (B) 323
 - (C) 330
 - (D) 345
 - (E) 351
-

15. The total amount of Judy's water bill for the last quarter of the year was \$40.50. The bill consisted of a fixed charge of \$13.50 plus a charge of \$0.0075 per gallon for the water used in the quarter. For how many gallons of water was Judy charged for the quarter?

								gallons
—	.	.	.	.	.	.	.	
	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) 10
- (B) 12
- (C) 14
- (D) 15
- (E) 18

16. The median of the numbers in list R is how much greater than the median of the numbers in list S ?

- (A) 8
- (B) 10
- (C) 12
- (D) 13
- (E) 15

17. If c and d are positive integers and m is the greatest common factor of c and d , then m must be the greatest common factor of c and which of the following integers?

- (A) $c + d$
- (B) $2 + d$
- (C) cd
- (D) $2d$
- (E) $2c$

18. Of the 750 participants in a professional meeting, 450 are females and $\frac{1}{4}$ of the male participants are less than thirty years old. If one of the participants will be randomly selected to receive a book prize, what is the probability that the person selected will be less than thirty years old?

- (A) $\frac{1}{6}$
- (B) $\frac{1}{3}$
- (C) $\frac{2}{3}$
- (D) $\frac{3}{4}$
- (E) $\frac{5}{6}$

19. In the xy -plane, what is the slope of the line whose equation is $3x - 2y = 8$?

- (A) -4
- (B) $-\frac{8}{3}$
- (C) $\frac{2}{3}$
- (D) $\frac{3}{2}$
- (E) 4

20. If a group of students having an average age of 16 years joined a class, the average age of all the students in the class reduces from 18 years to 17 years. What is the ratio of the number of students who joined the class to the number of students who were initially in the class?

- (A) $\frac{3}{4}$
- (B) $\frac{2}{5}$
- (C) $\frac{1}{2}$
- (D) $\frac{2}{3}$
- (E) $\frac{4}{5}$

21. If $(a - 3)^2 + |b - 3| = 0$, $(a - 3)^2 + |b - 3| = 0$, what is the value of $a - b$?

- (A) -1
- (B) 0
- (C) 1
- (D) 2
- (E) 3

22. What is one possible solution to the following equation:

$$\frac{x+1}{x} - \frac{3}{2x^2} = \frac{-5}{2x}$$

- (A) -1
- (B) 0
- (C) $\frac{-7+\sqrt{73}}{4}$
- (D) $\frac{-7-\sqrt{25}}{4}$
- (E) $\frac{-1}{2}$

23. If $4x + 3x - 2(x + 5) = -9$, then $x = ?$

- (A) $-\frac{1}{2}$
- (B) 0
- (C) $\frac{1}{5}$
- (D) $\frac{2}{3}$
- (E) $\frac{4}{5}$

24. If the ratio of milk cartons to juice boxes is $13 : x$ and there are 39 milk cartons and 18 juice boxes, what is the value of x ?

- (A) 4
- (B) 6
- (C) 8
- (D) 10
- (E) 12

25. A triangle, RST, is reflected across the y-axis to form the triangle $R'S'T'$ in the standard (x, y) coordinate plane; thus, R reflects to R' . The coordinates of point T are (j, k) . What are the coordinates of point T' ?

- (A) $(-j, k)$
- (B) $(j, -k)$
- (C) $(-j, -k)$
- (D) (k, j)

(E) It cannot be determined.

26. How many of the numbers between 20 and 40 are prime?

- (A) 3
 - (B) 4
 - (C) 5
 - (D) 6
 - (E) 7
-

27. If $a = -1$ and $b = 4$, what is the difference between $a3b + 3b$ and $a3b + 3b0$?

- (A) -11
 - (B) -3
 - (C) 2
 - (D) 4
 - (E) 9
-

28. What is the least common multiple (LCM) of 3, 8, and 10?

- (A) 40
 - (B) 80
 - (C) 120
 - (D) 140
 - (E) 240
-

26. How many of the numbers between 20 and 40 are prime?

- (A) 3
 - (B) 4
 - (C) 5
 - (D) 6
 - (E) 7
-

27. If $a = -1$ and $b = 4$, what is the difference between $a3b + 3b$ and $a3b + 3b0$?

- (A) -11
 - (B) -3
 - (C) 2
 - (D) 4
 - (E) 9
-

28. What is the least common multiple (LCM) of 3, 8, and 10?

- (A) 40
 - (B) 80
 - (C) 120
 - (D) 140
 - (E) 240
-



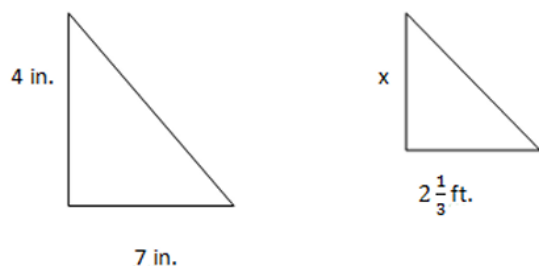
29. The chart above shows the monthly profits of 3 companies. What is the total profit generated by Store X and Store Z in the month of March?

- (A) 20,000
 - (B) 80,000
 - (C) 140,000
 - (D) 180,000
 - (E) 200,000
-

30. The chart provided shows the monthly profits of 3 stores. What was the percent increase in Store Y's profits over the course of the 4 months?

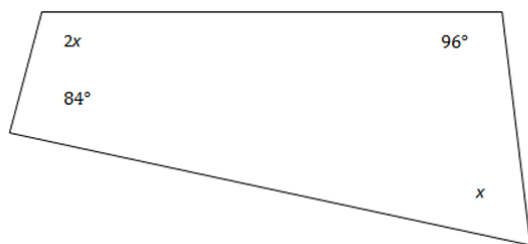
- (A) 25%
- (B) 33%
- (C) 50%
- (D) 75%
- (E) 100%

31. In order for the two triangles shown to be similar, what is one possible value for x ?



- (A) 8 in.
- (B) 10 in.
- (C) 16 in.
- (D) 20 in.
- (E) 24 in.

32. In quadrilateral WXYZ, what is the degree measurement of x ?



- (A) 60°
- (B) 75°
- (C) 80°
- (D) 90°
- (E) 120°

33. The revenue generated by Company X is divided between Doug and Moira in a 6 to 5 ratio respectively.

Column A: Moira's share when the revenue generated by Company X is \$15,700

Column B: \$7,900

- (A) The quantity in Column A is greater.
 - (B) The quantity in Column B is greater.
 - (C) The two quantities are equal.
 - (D) The relationship cannot be determined from the information given.
-

34. ANIMAL DISTRIBUTION IN THE ZOO

Animal	Percent
Lions	32%
Leopards	16%
Ocelots	20%
Tigers	8%
Bobcats	24%

If there are 44 leopards at the zoo, what is the zoo's total animal population?

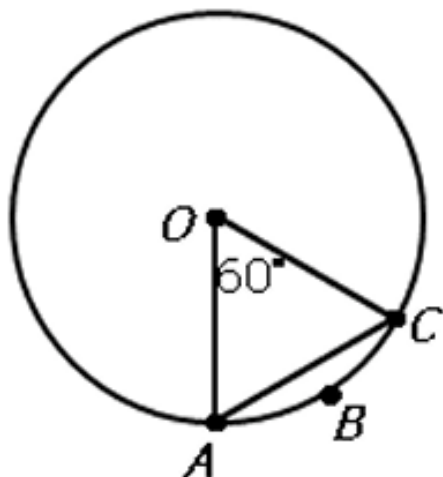
- (A) 225
 - (B) 275
 - (C) 325
 - (D) 350
 - (E) 375
-

35. The revenue generated by Company X is divided between Doug and Moira in a 6 to 5 ratio respectively.

Column A: Moira's share when the revenue generated by Company X is \$15,700 **Column B:** \$7,900

- (A) The quantity in Column A is greater.
 - (B) The quantity in Column B is greater.
 - (C) The two quantities are equal.
 - (D) The relationship cannot be determined from the information given.
-

36. O is the center of the circle with radius 6.



- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

37. The greatest prime factor of 144 is x

The greatest prime factor of 96 is y

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

38. The price of a pair of sneakers was \$80 for the last six months of last year. On January first, the price increased by 20

- (A) \$70.40
- (B) \$82.00
- (C) \$83.33
- (D) \$86.40
- (E) \$88.00

39. In how many different ways can 3 identical green shirts and 3 identical red shirts be distributed among 6 children such that each child receives a shirt?

- (A) 20
- (B) 40
- (C) 216
- (D) 720
- (E) 729

40. Dharik lives in a house on a straight street. For years, there have been 16 houses on his street to the right of his house and 17 houses on his street to the left of his house. Last year, 5 new houses were built on the same street even further to the left of those houses to the left of Dharik's house. If these are the only houses on this street, how many houses are on this street?

- (A) 225
 - (B) 275
 - (C) 325
 - (D) 350
 - (E) 375
-