

GRE 2024 Quant Practice Test 20

Time Allowed : 1 Hour 58 Minutes

Maximum Marks : 340

General Instructions

Read the following instructions very carefully and strictly follow them:

1. The GRE General Test is 1 hour and 58 minutes long (with one optional 10-minute break) and consists of 54 questions in total.
2. The GRE exam is comprised of three sections:
 - Quantitative Reasoning: 27 questions, 47 minutes
 - Verbal Reasoning: 27 questions, 41 minutes
3. You can answer the two sections in any order.
4. As you move through a section, you can skip questions, flag them for review, and return to them later within the same section.
5. When you have answered all questions in a section, you can review your responses before time expires.
6. If there is no time remaining in the section, you will automatically be moved to your optional break screen or the next section (if you have already taken your optional break).
7. Each review screen includes a numbered list of the questions in that section and indicates the questions you flagged.
8. Clicking a question number will take you to that specific question.
9. You may change any answer within the time allowed for that section.

1. Given the equations $x^3 - 30y = 4$ and $1797 + 3y = 15x$, compare Quantity A and Quantity B.

Quantity A: y

Quantity B: 1

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

2. John has \$50 for soda and he must buy both diet and regular sodas. His total order must have at exactly two times as many cans of diet soda as cans of regular soda. What is the greatest number of cans of diet soda John can buy if regular soda is \$0.50 per can and diet

soda is \$0.75 per can?

- (A) None of the other answers
 - (B) 51
 - (C) 25
 - (D) 75
 - (E) 50
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3. Find the intersection of the following two equations:

$$3x + 4y = 6$$

$$15x - 4y = 3$$

- (A) (1, 0.5)
 - (B) (0.2, 0)
 - (C) (18, 0)
 - (D) (3, 4)
 - (E) (0.5, 1.125)
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4. One of the roots of the equation $x^2 + kx - 12 = 0$ is 3, and k is a constant.

Quantity A: The value of k

Quantity B: -1

- (A) The two quantities are equal.
 - (B) Quantity A is greater.
 - (C) Quantity B is greater.
 - (D) The relationship cannot be determined from the information given.
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5. Two cars start 25 miles apart and drive away from each other in opposite directions at speeds of 50 and 70 miles per hour. In approximately how many minutes will they be 400 miles apart?

- (A) 200
 - (B) 3.33
 - (C) 187.5
 - (D) None of the other answers
 - (E) 3.125
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6. What is the value of $(5 + x)(10 - y)$ when $x = 3$ and $y = -3$?

- (A) 104
 - (B) 108
 - (C) 38
 - (D) 56
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7. If $2x + y = 9$ and $y - z = 4$ then $2x + z = ?$

- (A) 5
 - (B) 13
 - (C) Cannot be determined
 - (D) 29
 - (E) 21
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8. $11/(x - 7) + 4/(7 - x) = ?$

- (A) $15/(7 - x)$
 - (B) $15/(x - 7)$
 - (C) $7/(7 - x)$
 - (D) 15
 - (E) $(-7)/(7 - x)$
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9. If $6h - 2g = 4g + 3h$, in terms of g , $h = ?$

- (A) g
 - (B) $4g$
 - (C) $2g$
 - (D) $5g$
 - (E) $3g$
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10. Audrey, Penelope and Clementine are all sisters. Penelope is 8 years older than Clementine and 2 years younger than Audrey. If the sum of Penelope and Clementine's age is Audrey's age, how old is Clementine's age?

- (A) 4
- (B) 2
- (C) 8
- (D) 3

11. If $3x + y = 13$ and $x - 2y = -12$, what is the value of x ?

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

12. A given university has an average professor pay of \$40,000 a year and an average administrator pay of \$45,000 per year. If the ratio of professors to administrators is 4 to 3, and the total pay for professors and administrators in a year is \$40,415,000, how many professors does the college have?

- (A) 500
- (B) 375
- (C) 411
- (D) 548
- (E) 475

13. Given $x > 0$.

Quantity A: $-5x + 4$

Quantity B: $8 - 2x$

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

14. A theme park charges \$10 for adults and \$5 for kids. How many kids tickets were sold if a total of 548 tickets were sold for a total of \$3750?

- (A) 431
 - (B) 157
 - (C) 346
 - (D) 248
 - (E) 269
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15. Given the following information:

Sally is 2 years younger than Abby.

Daisy is 5 years older than Tracy.

Abby is 6 years older than Tracy.

Quantity A: Sally's age

Quantity B: Daisy's age

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

16. Given the equations:

$$x^2 + 5x - 24 = 0$$

$$y^2 - 9y + 20 = 0$$

Quantity A: x

Quantity B: 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.
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17. Jen and Karen are travelling for the weekend. They both leave from Jen's house and meet at their destination 250 miles away. Jen drives 45mph the whole way. Karen drives 60mph but leaves a half hour after Jen. How long does it take for Karen to catch up with Jen?

- (A) 1.5 hours
 - (B) She can't catch up.
 - (C) 3 hours
 - (D) 1 hour
 - (E) 2 hours
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18. Solve for z : $3(z + 4) - 7 = 17$

- (A) 4
- (B) 8
- (C) 2

- (D) -8
 - (E) -2
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19. If $5(3x + y) = 15$, what is x in terms of y ?

- (A) $x = 10 - \frac{y}{3}$
 - (B) $x = 3 - 3y$
 - (C) $x = 10 + \frac{y}{3}$
 - (D) $x = 15 + \frac{5y}{3}$
 - (E) $x = 1 - \frac{y}{3}$
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20. Given:

$$y = x^2 - 10$$

$$y = 15$$

Quantity A: $y/3$

Quantity B: x

- (A) Quantity B is greater.
 - (B) Quantity A is greater.
 - (C) The relationship cannot be determined from the information given.
 - (D) The two quantities are equal.
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21. If $a = \frac{1}{3}b$ and $b = 4c$, then in terms of c , $a - b + c = ?$

- (A) c
 - (B) $\frac{7}{3}c$
 - (C) $-\frac{5}{3}c$
 - (D) $-\frac{11}{3}c$
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22. If $14x - 16y = 16$ and $yz = 12$, then what is the value of $3x - z$?

- (A) 1
- (B) 2
- (C) 4
- (D) 6
- (E) 3

23. If $x^3 = 8$, then $x^2(4/(3-x))(2/(4-x)) - (4/x^2) = ?$

- (A) 16
- (B) 35
- (C) 0
- (D) 15
- (E) 22

24. Sarah's current age is three times Ron's age two years ago. Sarah is currently 14 years older than Ron. What is the sum of Sarah and Ron's current age?

- (A) 24
- (B) 36
- (C) 34
- (D) 32

25. Jack has 14 coins consisting of nickels and dimes that total \$0.90. How many nickels does Jack have?

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

26. Abby works at a car dealership and receives a commission "c" which is a percent of the profit the dealership makes from the sale, which is the difference between the price "p" of the car and the value "v" of the car. How much, in dollars, does the dealership earn per transaction?

- (A) $(p - v)(0.01c)$
- (B) $(p - v)(1 - 0.01c)$
- (C) $p(v - 0.01c)$
- (D) $(p - v)(1 - c)$
- (E) $pv(0.01c)$

27. If $8s - 6k = 4s - 2k$, then, in terms of s, k=?

- (A) Cannot be determined
 - (B) 3s
 - (C) 5s
 - (D) 2s
 - (E) s
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28. Kim is twice as old as Claire. Nick is 3 years older than Claire. Kim is 6 years older than Emily. Their ages combined equal 81. How old is Nick?

- (A) 22
 - (B) 27
 - (C) 17
 - (D) 13
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29. The sum of two consecutive odd integers is 32. What is the value of the next consecutive odd integer?

- (A) 33
 - (B) 21
 - (C) 17
 - (D) Cannot be determined
 - (E) 19
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30. A store sells potatoes for \$0.24 and tomatoes for \$0.76. Fred bought 12 individual vegetables. If he paid \$6.52 total, how many potatoes did Fred buy?

- (A) 5
 - (B) 8
 - (C) 7
 - (D) 2
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31. Jon invested part of \$16,000 at 3% and the rest at 5% for a total return of \$680.

Quantity A: The amount Jon invested at 5% interest

Quantity B: The amount Jon invested at 3% interest

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

(D) Quantity B is greater

32. Given the system of equations:

$$3x + 4y = 5$$

$$x - y = 6$$

Quantity A: x

Quantity B: y

- (A) The two quantities are equal.
 - (B) The relationship cannot be determined from the information given.
 - (C) Quantity B is greater.
 - (D) Quantity A is greater.
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33. Bill and Bob are working to build toys. Bill can build k toys in 6 hours. Bob can build k toys in 3 hours. How long would it take Bob and Bill to build $4k$ toys working together?

- (A) 8 hours
 - (B) 12 hours
 - (C) 9 hours
 - (D) 2 hours
 - (E) 4 hours
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34. If $x = 4$, and $y = 3x + 5$, then $2y - 1$ equals

- (A) 47
 - (B) 22
 - (C) 15
 - (D) 33
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35. A hybrid car gets 40 miles per gallon. Gasoline costs \$3.52 per gallon. What is the cost of the gasoline needed for the car to travel 120 miles?

- (A) \$9.54
- (B) \$10.56
- (C) \$10.36
- (D) \$14.08

(E) \$12.53

36. Two palm trees grow next to each other in Luke's backyard. One of the trees gets sick, so Luke cuts off the top 3 feet. The other tree, however, is healthy and grows 2 feet. How tall are the two trees if the healthy tree is now 4 feet taller than the sick tree, and together they are 28 feet tall?

- (A) 8 and 20 feet
 - (B) 11 and 17 feet
 - (C) 12 and 16 feet
 - (D) cannot be determined
 - (E) 14 and 14 feet
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37. Given the system of equations:

$$x + y = 12$$

$$2x - y = 6$$

Quantity A: x

Quantity B: y

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