GRE 2024 Quant Practice Test 17

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.

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1. Given the functions f(x) = 2x + 4 and g(x) = 3x - 6, what is f(g(x)) when x = 6?

(A) 144
(B) 12
(C) 28
(D) 192
(E) 16

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2. A jet goes from City 1 to City 2 at an average speed of 600 miles per hour, and returns along the same path at an average speed of 300 miles per hour. What is the average speed, in miles per hour, for the trip?

(A) 300 miles/hour
(B) 400 miles/hour
(C) 350 miles/hour
(D) 450 miles/hour
(E) 500 miles/hour

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3. If $f(x)=3x+7$ and $g(x)=x^2-12$, what is $f(g(x))$?

(A) $3x^3-29$
(B) $9x^2-29$
(C) $3x^2+29$
(D) $3x^2-29$
(E) $9x^3+29$

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4. What is $f(-3)$ if $f(x) = x^2 + 5$?

(A) -14
(B) 4
(C) 15
(D) 14
(E) -4

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5. An outpost has the supplies to last 2 people for 14 days. How many days will the supplies last for 7 people?

(A) 4
(B) 9
(C) 5
(D) 10
(E) 7

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6. Given $f(x)=3x^2-5$ and $g(x)=9-2x$, find $f(g(5))$.

(A) -1
(B) 4
(C) 131
(D) -2
(E) 70

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7. Find f(6) if f(x)=—x^2+4x-127—

(A) -136
(B) -36
(C) -67
(D) 67
(E) 36

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8. A function f(x) = -1 for all values of x. Another function g(x) = 3x for all values of x. What is g(f(x)) when x = 4?

(A) -12
(B) -3
(C) 3
(D) -1
(E) 12

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9. Worker A can make a trinket in 4 hours, Worker B can make a trinket in 2 hours. When they work together, how long will it take them to make a trinket?

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

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10. For all values of x, f(x) = $7x^2$ - 3, and for all values of y, g(y) = 2y + 9. What is g(f(x))?

(A) $7y^2$ - 3
(B) $14x^2$ + 3
(C) $14y^2$ + 3
(D) $14x^2$ - 3
(E) 2x + 9

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11. The operation is defined as a b = a(b+1) - 3.
Compare Quantity A and Quantity B.
Quantity A: 1 1
Quantity B: 2 0

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

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12. Alice is twice as old as Tom, but four years ago, she was three years older than Tom is now. How old is Tom now?

(A) 7
(B) 13
(C) 21
(D) 3
(E) 9

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13. If the average of two numbers is 3y and one of the numbers is y + z, what is the other number, in terms of y and z?

(A) 5y + z
(B) 4y - z
(C) 3y + z
(D) 5y - z
(E) y + z

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14. What is the value of the function $f(x) = 6x^2 + 16x - 6$ when $x = -3$?

(A) -108
(B) -12
(C) 0
(D) 96
