

GRE QUANT PRACTICE PAPER

1. If $x=12$ and $y=23$, then which of the following is equal to $2x+y$?

213

4

103

97

127

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

12

16

144

192

28

3. What values of x make the statement $|5x-9| \geq 6$ true?

$x \geq 6, x \leq 13$

$x \geq 5, x \leq 15$

$$x \geq 3, x \leq 35$$

$$x \geq 4, x \leq -12$$

$$x \geq 15, x \leq 25$$

4. Solve:

$$-3(2x-5) = 9-6x$$

159

9

No Solution

15

Infinitely Many Solutions

5. A rectangle has a perimeter of 50 m and an area of 150 m². What is the difference between the length and width?

20 m

10 m

25 m

15 m

5 m

Quantitative Comparison

6. Quantity A: $x^3/3$
Quantity B: $(x/3)^3$

Quantity A is greater.

The two quantities are equal.

The relationship cannot be determined from the information given.

Quantity B is greater.

7. Simplify the following:

$$\frac{48^{50} + 80^{30}}{4^{20}}$$

17^{80}

$4^{16} * 3^{25} + 2^{20} * 5^{15}$

$12^{30} + 5^{10}$

$2^{160} * 3^{50} + 2^{80} * 5^{30}$

17^{50}

8. Simplify the following rational expression:

$$7x - 18x^2 + 6x - 14x^2$$

$x - 32x^2$

$x - 4x^2$

$13x - 28x^2$

$13x - 4x^2$

$$13x - 32x^2$$

9. You are told that x can be determined from the expression:

$$\frac{1}{x^2 - 4} = x^2 + 4$$

Determine whether the absolute value of x is greater than or less than 2.

$$|x| > 2$$

The quantities are equal

The relationship cannot be determined from the information given.

$$|x| < 2$$

10. Simplify:

$$15 - \sqrt{-20} - \sqrt{+35} - \sqrt{}$$

$$5 - \sqrt{(3 - \sqrt{+7} - \sqrt{-2})}$$

$$215 - \sqrt{+2} - \sqrt{}$$

$$2 - \sqrt{(5 - \sqrt{+27} - \sqrt{})}$$

$$5 - \sqrt{(10 - \sqrt{-2})}$$

$$7 - \sqrt{-35} - \sqrt{}$$

11. $180 - \sqrt{+125} - \sqrt{} = ?$

25.0

17.5

$1110\sqrt{\quad}$

$115\sqrt{\quad}$

$305\sqrt{\quad}$

12. Rectangle A has a length of 20 inches and a width of 3 inches. Rectangle B has a length of 9 inches and a width of 10 inches. By what number must the area of rectangle A be multiplied to equal the area of rectangle B ?

5

1.5

2

3.5

13. 0.5815 is equal to which of the following?

$5.815 * 10$

$0.05815 * 10^4$

$5.815 * 10^{-1}$

$5.815 * 10^{-2}$

$0.05815 * 10^{-1}$

Quantitative Comparison: Compare Quantity A and Quantity B, using additional information centered above the two quantities if such information is given.

14. $10 < n < 15$

Quantity A
 $\frac{7}{13}$

Quantity B
 $\frac{4}{n}$

Quantity B is greater.

The answer cannot be determined from the information given.

The two quantities are equal.

Quantity A is greater.

15. Which of the following improper fractions is equivalent to $14\frac{2}{5}$?

$\frac{725}{5}$

$\frac{705}{5}$

$\frac{165}{5}$

$\frac{843}{5}$

$\frac{245}{5}$

16. Solve for x:

$$13(4x+125)=2$$

910

152

13

7

1229

17. Half of a salad is lettuce. A third of it is tomatoes. The remainder is made of cucumbers. Which of the following is the ratio of lettuce to cucumbers in the salad?

1:6

6:1

1:2

3:1

5:3

18. For every two pounds of fudge are bought at the regular price of \$4.25 per pound, the store gives a free pound of fudge to the customer. Lauren's fudge bill was \$21.25. How many pounds of fudge did she leave the store with?

7

9

6

5

8

19. Quantity A: The number of positive even integers less than 1000
Quantity B: The number of positive odd integers less than 1000

The two quantities are equal.

Quantity A is greater.

Quantity B is greater.

The relationship cannot be determined from the information given.

20. Column A

$$5!/3!$$

Column B

$$6!/4!$$

The relationship cannot be determined from the information given.

The quantity in Column A is greater.

The two quantities are equal.

The quantity in Column B is greater.

21. If x and y are both less than zero, which of the following is NOT possible?

$$xy - yx = 0$$

$$x + y = -5$$

$$3x - 2y = 5$$

$$xy = -1$$

$$x \times y = 12$$

22. The first term in a sequence of integers is 2 and the second term is 10. All subsequent terms are the arithmetic mean of all of the preceding terms. What is the 39th term?

5

300

1200

600

6

23. What is the simple interest rate on an account that accrued \$450 after a year if the original deposit was \$7505? Round your answer to the nearest hundredth.

4.56%

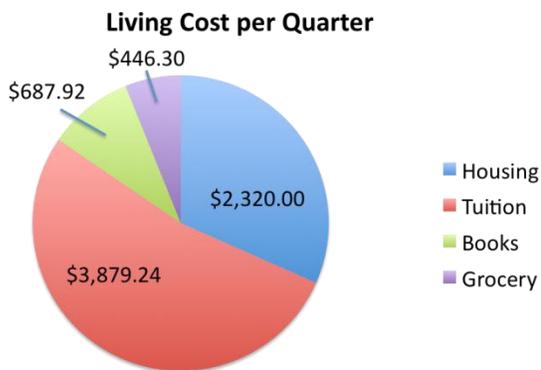
12.41%

6%

16.67%

5.05%

A college student takes out a loan of \$8,000 per Quarter. A college student's average living cost is represented by the chart below.



24. Suppose tuition is increased by 8%. What is the increase in the percentage of the loan that is spent on tuition and books?

.03%

8%

60.97%

3.88%

25. From a group of 8 students, 3 are attending a meeting.

Quantity A: The number of different groups that could attend among the 8 students

Quantity B: 336

The relationship cannot be determined from the information given.

Quantity A is greater.

The two quantities are equal.

Quantity B is greater.

26. The probability that events A and/or B will occur is 0.88.

Quantity A: The probability that event A will occur.

Quantity B: 0.44.

The two quantities are equal.

The relationship cannot be determined from the information given.

Quantity B is greater.

Quantity A is greater.

27. Every day is either rainy or sunny. Mondays are rainy with probability $\frac{3}{5}$. Tuesdays are sunny with probability $\frac{1}{4}$. Wednesdays are also sunny with probability $\frac{2}{3}$. What is the probability that the weather is the same on Monday, Tuesday, and Wednesday?

13/60

1/8

15/19

3/20

1/15

28. What is the other endpoint of a line segment with one point that is $(-15,14)$ and a midpoint of $(-19,4)$?

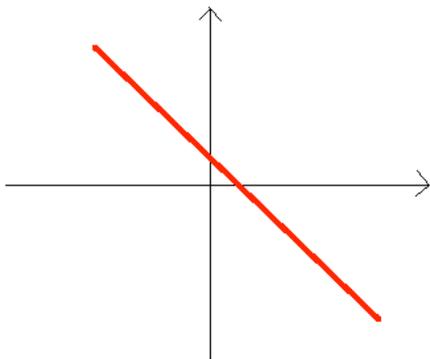
$(-23,-6)$

$(-20,-12)$

$(-14,-14)$

$(-12,-9)$

$(14,17)$



29. Which of the following could be an equation for the red line pictured above?

$y=4x+3$

$$y = -4x - 2$$

$$y = 5x - 4$$

$$y = 15x + 12$$

$$y = -3x + 3$$

30. Which of the following equations has a y-intercept of 13?

$$y = (x - 4)^2 - 3$$

$$4x^2 = 12y + 12$$

$$22x - 2y = 1$$

$$3y = 4x^2 - 16$$

$$2x^2 - 16y = 5$$