

GRE QUANT PRACTICE PAPER

1. A high school has 200 students. 120 are male, 50 are upper division students, and 40 are upper division male students. What is the probability of choosing a lower division female student, given the student is female?

7/8

2/5

1/4

7/15

7/20

A: $2x + 7y = 14$

B: $14x = 7 - 2y$

C: $91 - 14y = 4x$

D: $10.5y = 814 - 3x$

2. Which of the above-listed lines are parallel?

None of them

All four lines

B and D

A, C, and D

A and C

3. Quantity A: The distance between the points with rectangular coordinates (6,0) and (10,0)

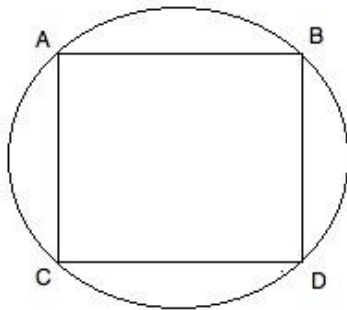
Quantity B: The distance between the points with rectangular coordinates (1,1) and (-2,4)

Quantity B is greater.

The relationship cannot be determined from the information given.

Quantity A is greater.

The two quantities are equal.



4. In the diagram above, square ABCD is inscribed in the circle. If the area of the square is 9, what is the area of the circle?

$3\sqrt{2}\pi$

4.5π

9π

18π

3π

5. In a given parallelogram, the measure of one of the interior angles is 25 degrees less than another. What is the approximate measure rounded to the nearest degree of the larger angle?

103 degrees

77 degrees

102 degrees

101 degrees

78 degrees

6. The area of a rectangle is 70in^2 . Its perimeter is 38in . What is the length of its shorter side?

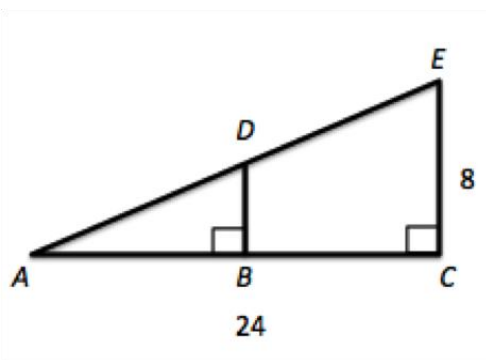
12in

7in

14in

8in

5in



7. Given triangle ACE where B is the midpoint of AC , what is the area of triangle ABD ?

72

48

24

96

Quantity A: The length of a side of a cube with a volume of 343 in^3 .

Quantity B: The length of a side of a cube with surface area of 294 in^2 .

8. Which of the following is true?

Quantity A is larger.

The relationship between the two quantities cannot be determined.

Quantity B is larger.

The two quantities are equal

9. A cube weighs 216 grams. If you carve a sphere out of the cube such that the diameter of the sphere is equal to one of the sides of the square, how many grams is the weight of the resulting sphere?

36π

288π

144π

216π

9π

10. In a given translation project, three translators each took sections of a book to translate. The first translator took 15000 words, which he translated at a rate of 500 words per 20 minutes. The second translator took 200000 words, which he translated at a rate of 1250 words per half hour. The third took 10000 words, which he translated at a rate of 250 words per 15

minutes. In terms of words per hour, what was the overall average translation rate for this project?

750 words per hour

2250 words per hour

1667 words per hour

667 words per hour

1575 words per hour

11. Indicate whether Quantity A or Quantity B is greater, or if they are equal, or if there is not enough information given to determine the relationship.

$$n > 0$$

Quantity A: 16^{n+2}

Quantity B: $2^4 \times (8^{n+1})^2 \div 4^n$

The relationship cannot be determined from the information given.

The quantities are equal.

Quantity A is greater.

Quantity B is greater.

12. If $\left[\frac{7}{8}\right]^n = \sqrt{\left[\frac{7}{8}\right]^5}$, then what is the value of n?

25

$\sqrt{5}$

$\frac{2}{5}$

$5/2$

$1/5$

13. Simplify: $3^2 * (4^{23} - 4^{21})$

4^4

3^{21}

$3^3 * 4^{21} * 5$

$3^3 * 4^{21}$

None of the other answers

14.

$$\frac{(xy)^4 z^0}{x^4 y^5}$$

Which of the following is equal to the expression $\frac{(xy)^4 z^0}{x^4 y^5}$, where $xyz \neq 0$?

$1/y$

xy

z

xyz

$z/(xy)$

15. If $3y^{-1}3^{-2}=27y^3y$, what is the value of y?

23

3

32

4

13

16. $(b * b^4 * b^7)^{1/2} / (b^3 * b^x) = b^5$
If b is not negative then x = ?

-2

1

7

-1

Simplify

17. $\frac{20x^4y^{-3}z^2}{5z^{-1}y^2x^2} =$

$4x^5y^{-2}$

None

$15x^2y^2z^2$

$\frac{4x^2z^3}{y^5}$

$15x^{-2}y^{-2}z^{-2}$

Quantitative Comparison

18. Quantity A: $6^4 - 3^2$
Quantity B: $5^2 - 4^2$

The relationship cannot be determined from the information given.

Quantity A is greater.

Quantity B is greater.

The two quantities are equal.

19. Simplify: $y^3x^4(yx^3 + y^2x^2 + y^{15} + x^{22})$

$2x^4y^4 + 7y^{15} + 7x^{22}$

$y^3x^{12} + y^6x^8 + y^{45}x^4 + y^3x^{88}$

$y^3x^{12} + y^6x^8 + y^{45} + x^{88}$

$y^3x^{12} + y^{12}x^8 + y^{24}x^4 + y^3x^{23}$

$y^4x^7 + y^5x^6 + y^{18}x^4 + y^3x^{26}$

20. Evaluate:

$$y = 3^{13} - 9^5(127) - 3$$

78

30

81

27

24

21. Solve for x: $x^2 = 45 - 12x$

-3 or 15

None of the other answers

12 or 45

-15 or 3

3

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

22. Quantity A Quantity B

$$(2^3)^2$$

$$(2^2)^3$$

The two quantities are equal.

The relationship cannot be determined from the information given.

Quantity A is greater.

Quantity B is greater.

23. Quantity A:

$$(0.5)^3(0.5)^3$$

Quantity B:

$$(0.5)^7$$

The relationship cannot be determined from the information given.

Quantity B is greater.

Quantity A is greater.

The two quantities are equal.

Quantitative Comparison

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

The relationship cannot be determined from the information given.

Quantity A is greater.

Quantity B is greater.

The two quantities are equal.

25. Compare $5^{27}(850)$ and $5^{29}(34)$.

$5^{27}(850) < 5^{29}(34)$

$5^{27}(850) > 5^{29}(34)$

$5^{27}(850) = 5^{29}(34)$

The answer cannot be determined from the information given.

26. Simplify:
 $(6x^2)^3 \cdot x^{-7} \cdot 2x^4$

0

1

12x2

432x3

6x2

27. $\frac{7^{10} - 7^8}{7^9 - 7^7} =$

343

7

42

49

$a > 0$, and a is odd.

$b > 1$

28. Quantity A: $(1-b)^a$

Quantity B: $(-b)^a$

Quantity B is greater.

The relationship cannot be determined from the information given.

Quantity A is greater.

The two quantities are equal.

29. Which of the following is equal to $(5^4 \cdot 5^5)^{20}$?

25^{180}

5^{180}

5^{29}

25^{29}

5^{40}

30. Simplify: $(x^3 \cdot 2x^4 \cdot 5y + 4y^2 + 3y^2)/y$

None of the other answers

$10x^7y + 7y^2$

$10x^{11} + 7y^3$

$10x^7 + 7y$

$10x^7 + 7y^3$