Mathematics Review: Algebra, Geometry, Statistics, and More

Mathematics · Practice Test · 21 Questions

1. Verify if the expression 4 × 4 - 5 × 3 is equivalent to 1.

A) True
B) False

2. What is the next number expression after 5 × 5 - 6 × 4 in the pattern (n × n) - ((n+1) × (n-1))?

A) 6 × 6 - 7 × 5
B) 7 × 7 - 8 × 6
C) 5 × 5 - 6 × 4
D) 6 × 6 - 5 × 7

3. Which algebraic expression represents the set that simplifies to 1?

A) (n)(n) - (n+3)(n+1)
B) (n)(n) - [(n+1)(n-1)]
C) (n-1)(n-1) - n(n-2)
D) All of the above

4. Why were the chosen algebraic expressions correct?

A) Because they represent a pattern in the numbers.
B) Because they simplify to 1.
C) Because they involve subtraction and multiplication.
D) Because they are complex to solve.

5. If you chose the expression (n)(n) - [(n+1)(n-1)], what does 'n' represent in the numerical expression 4 × 4?

A) The second number (4)
B) The first number (4)
C) The result of the multiplication (16)
D) The number of terms (2)

6. Show that 1024 is a power of 2 and write its exponential form.

A) 2^9
B) 2^11
C) 2^10
D) 4^5

7. Find a power of 2 that is a multiple of 16 and is between 50 and 200.

A) 32
B) 128
C) 256
D) 16

8. Is there a number between 0.998 and 0.999?

A) No
B) Yes
C) Only if it's a fraction
D) Only if it's an integer

9. Subtract 0.998 from 0.999.

A) 0.1
B) 0.01
C) 0.001
D) 1

10. Is there a fraction between 3/4 and 1?

A) No
B) Yes
C) Only if the denominator is larger
D) Only if the numerator is smaller

11. Based on Figure 1, how many students had a grade below 84?

A) 3 students
B) 5 students
C) 7 students
D) 10 students

12. What does the graph in Figure 1 suggest about the relationship between absences and grades?

A) A positive correlation
B) No correlation
C) A negative correlation
D) The data is inconclusive

13. Which Purok shows more diversity in income, based on the range of their income bars?

A) Purok 2
B) Purok 1
C) They show equal diversity
D) Cannot be determined from the graph

14. Should both puroks get the same aid if their averages are equal?

A) Yes, because averages are the same.
B) No, because diversity in income may require different aid.
C) It depends on the total population of each purok.
D) Only if the ranges are also equal.

15. What is the total number of students who participated in music?

A) 18
B) 31
C) 49
D) 110

16. How many students did not participate in any activity (music or sports)?

A) 18
B) 19
C) 31
D) 49

17. What is the probability of selecting a student who participated in both music and sports?

A) 18/49
B) 18/110
C) 31/110
D) 49/110

18. On the number line in Figure 3, what is the value of point F?

A) 300
B) 0
C) -300
D) -100

19. What are the coordinates of Point C on the Cartesian plane?

A) (4, 0)
B) (0, 4)
C) (4, 4)
D) (0, 0)

20. Calculate the area of Triangle ABC.

A) 6 sq units
B) 12 sq units
C) 24 sq units
D) 8 sq units

21. Which is shorter: the distance from House to School (A to B) or House to Barangay Hall (A to C)?

A) House to Barangay Hall (A to C)
B) House to School (A to B)
C) They are equal distances
D) Cannot be determined without more information