

MATH Exam Paper

Subjective Questions

1. What is the Pythagorean theorem and explain its application?
Answer:
2. Derive the quadratic formula from the general form of a quadratic equation.
Answer:
3. Explain the concept of limits in calculus.
Answer:
4. Solve the following system of equations using substitution method: $2x + y = 10$ and $3x - y = 5$.
Answer:
5. What are eigenvalues and eigenvectors? Provide an example.
Answer:
6. Describe the difference between permutations and combinations.
Answer:
7. What is the fundamental theorem of algebra?
Answer:
8. Explain how the binomial theorem can be used to expand expressions.
Answer:
9. Find the derivative of the function $f(x) = x^3 + 5x^2 - 2x + 7$.
Answer:
10. Explain the concept of mathematical induction and prove the sum formula for the first n integers.
Answer:
11. Formula of circle?
Answer:
12. What is the formula of a triangle?
Answer:

MCQ Questions

13. What is $2 + 2$?
a) 3
b) 4
c) 5
d) 6
14. What is the derivative of x^2 ?
a) 1
b) $2x$
c) x^2
d) $2x^2$
15. Solve for x : $5x - 10 = 0$
a) $x = 0$
b) $x = 2$
c) $x = 10$
d) $x = -2$
16. What is the value of π ?
a) 3.14
b) 3.1416
c) 3.14159
d) 3.141
17. What is the area of a circle with radius 3?
a) 9π
b) 6π
c) 3π

d) π