BAKU STATE UNIVERSITY

SPECIALIZATION: Teaching mathematics.
SUBJECT: Methods of teaching mathematics – 2

EXAM QUESTIONS

1. The main tasks in the process of studying the elements of algebra.
2. Various classifications of identity transformations and stages of their study.
3. Logical-mathematical analysis of a specific topic.
4. Logical and mathematical analysis of the topic "Identical transformation of irrational expressions."
5. Problems of studying numerical sets in a school mathematics course.
6. Stages of studying the number set.
7. Methodology for introducing the concept of "irrational number".
8. The concept of expansion of a numerical set. Reasons for expanding the number of sets.
9. The main tasks in the process of studying the concept of "function".
10. Taking into account cognitive styles in the process of learning functions.
11. Methodology for studying transcendental functions.
12. Elementary transformations of the graph of a function.
13. Stages of the function research process.
14. Requirements that determine the need to study the content of the line "Equations and Inequalities".
15. Equivalent transformations of equations and inequalities.
16. The main stages of studying equations and inequalities.
17. Logical justification for solving equations and inequalities.
18. Methods for studying irrational equations in primary school.
19. Methodology for studying equations dependent on parameters in primary school.
20. Goals of studying geometric material in grades 1-6.
21. Methodological features of studying geometric material in grades 1-6.
22. Features of the development of logical thinking of students in grades 7-8.
23. Parallelogram and methods for studying its properties.
24. Methodology for studying the trapezoid and its properties.
25. Methodology for studying the relations of parallelism and perpendicularity on a plane.
26. Methodology for studying the relations of parallelism and perpendicularity in space.
27. Basic approaches to the study of vectors and coordinates.
28. Methodology for studying the "Vectors" method.
29. Methodology for studying the "Coordinates" method.
30. Goals of studying geometric transformations.
31. Methodology for studying similarity transformation.
32. Methodology for studying motion transformation.
33. Methodology for studying number sequences.
34. Methodology for introducing the concept of "sequence limit".
35. Methodology for introducing the concept of "limit of a function at a point."
36. The main lines of the algebra course and the beginning of analysis.
37. Methodology for introducing the concept of "derivative of a function."
38. The goals of studying the elements of mathematical analysis.
39. The goals of studying the elements of "probability theory".
40. Methodology for studying the basic concepts of probability theory.
41. Methodology for studying the basic theorems of probability theory.
42. Stages of studying a function using derivatives.

43. Method for studying the general properties of a function.
44. Organization of the study of the topic "Solving equations with an unknown variable under the modulus sign."
45. Organization of studying the topic "Quadratic function".
46. Organization of studying the topic "Power function".
47. Organization of studying the topic "Logarithmic function".
48. Organization of studying the topic "Square root".
49. Organization of studying the topic "Solving exponential equations."
50. Organization of studying the topic "Solving logarithmic equations."
51. Organization of studying the topic "Solving rational inequalities."
52. Organization of studying the topic "Solving trigonometric equations."
53. Organization of studying the topic "Solving irrational inequalities."
54. Organization of studying the topic "Inscribed and circumscribed circles of a triangle."
55. Organization of the study of the topic "Inscribed and circumscribed circles of a quadrilateral."
56. Methods of studying numbers and numerical sets in teaching mathematics.
57. Methods for studying rational, real and complex numbers.
58. Methods for studying identity transformations and calculations in teaching mathematics.
59. Methods for studying equations and inequalities in a school mathematics course.
60. Equations, inequalities and methods of studying them in different ways.
61. Techniques for solving problems using different methods.
62. Methods for studying elementary functions in teaching mathematics.
63. Methods for studying algebraic and transcendental functions.
64. Various approaches to defining the concept of function.
65. Teaching the concept of continuity in high school.
66. Various approaches to axiomization of a school geometry course.
67. Methodology for studying combinations with repetitions.
68. Methodology for studying the measurement of geometric quantities (length, area, volume, etc.).
69. Modern approaches to organizing mathematics teaching.