Lesson plan

Lesson: Real functions

Duration: 60 minutes

Target class: high school students

Objectives:

1. Understand the concept of real functions.
2. Learn about the different types of real functions.
3. The ability to draw real functions and analyze their behavior.
4. Understanding the relationship between real functions and real problems

Materials and resources:

1. Blackboard and markers.
2. Presentation slides.
3. Worksheets and exercises.
4. Calculator.

Steps:

1. Introduction to previous lessons: Review the basic concepts covered in previous lessons to recall the important basics.

2. Definition of real functions: Explain the concept of real functions using simple examples. Explain that a real function is a rule that gives every real number another numerical value.

3. Types of real functions: Introduce the different types of real functions such as linear functions, quadratic functions, exponential functions, and trigonometric functions. Explanation of each type, its laws, formula, and transactions.

4. Drawing real functions: Explaining how to draw real functions on the graphical level. Use different examples to illustrate the process, such as plotting linear and

quadratic functions. Explain how to use the table and plot the points to get the full curve.

5. Analyzing the behavior of functions: Explain how to analyze the behavior of real functions, such as checking intersections with axes, checking transitions and slopes, and determining extrema, inverses, and finite regions.

6. Realistic applications: Highlight the relationship between real functions and real problems. Use everyday examples to illustrate how real functions are used to solve practical problems.

7. Exercises: Distribute worksheets and exercises to students to practice their skills in drawing and analyzing real functions.

8. Review and conclusion: Review with the teacher the main points covered in the lesson and the most important concepts required to understand real functions. Briefly review some key examples and give students an opportunity to ask questions and discuss.

9. Homework: Assign a homework assignment to reinforce students' application of their skills in graphing and analyzing real functions.