

Name _____

Decoding Differential Equations: Order and Linearity

Multiple Choice Questions

1. What does the order of a differential equation refer to?

- A) The highest derivative present
- B) The number of variables involved
- C) The complexity of the equation
- D) The degree of the polynomial function

2. How is linearity defined in a differential equation?

- A) The presence of only one variable
- B) The appearance of terms in a linear manner
- C) The absence of derivatives
- D) The presence of non-integer exponents

3. What does the first derivative of a function represent?

- A) Position
- B) Acceleration
- C) Speed
- D) Jerk

4. Which type of differential equation is simpler to solve?

- A) Linear
- B) Non-linear
- C) Quadratic
- D) Cubic

5. How are derivatives used in differential equations?

- A) To calculate the slope of a tangent line
- B) To determine the y-intercept
- C) To find the area under a curve
- D) To describe how a function changes

