

Name \_\_\_\_\_

## The Code of Equations: How Differential Equations Drive Computer Science

### Multiple Choice Questions

1. What is one primary application of differential equations in computer science?

- A) Designing clothing patterns
- B) Modeling real-world phenomena
- C) Analyzing ancient civilizations
- D) Studying animal behavior

2. How do computer scientists use differential equations in algorithm design?

- A) To create fictional characters
- B) To predict weather patterns
- C) To compose music
- D) To analyze and improve algorithm efficiency

3. What role do differential equations play in machine learning?

- A) Modeling complex relationships in data
- B) Designing architectural structures
- C) Analyzing geological formations
- D) Predicting population growth

4. How are differential equations used in computer graphics?

- A) To simulate weather patterns
- B) To model light, color, and geometry
- C) To study ancient civilizations
- D) To analyze animal behavior

5. What is one way differential equations contribute to computer science?

- A) By analyzing musical compositions
- B) By designing clothing patterns
- C) By modeling real-world phenomena
- D) By predicting population growth

