Engineering Maths - Unit 1 Notes

Engineering Mathematics - Unit 1: Calculus

1.1 Limits and Continuity

- Definition of Limit
- Left-hand and Right-hand Limits
- Continuity at a point

1.2 Differentiation

- First Principles
- Chain Rule
- Product and Quotient Rules

1.3 Integration

- Indefinite Integrals
- Definite Integrals
- Area under curves

Practice Problems

1. Find the limit of (sin x)/x as x approaches 0.
2. Differentiate y = x^2 * sin(x).
3. Integrate x^3 dx from 0 to 1.