

## 1111 MATH

**Textbook: Discrete Mathematics and Its Applications, 7th edition**

**By Kenneth H. Rosen**

### Introduction to Number System

- ✦ **Binary System: Slides (1)**
- ✦ **Octal System: Slides (2)**
- ✦ **Hexadecimal System: Slides (3)**

You Can read Chapter 4 Section 2 (Integer Representation and Algorithms)

### Logic

- ✦ **Propositional Logic: Slides (4)**
- ✦ **Propositional Equivalences: Slides (5)**

You Can read Chapter 1 Section 1.1 and 1.3 (The Foundations: Logic and Proofs)

### Sets

- ✦ **Sets: Slides (6)**
- ✦ **Set operations: Slides (7)**

You Can read Chapter 2 Section 2.1 and 2.3 (Basic Structures: Sets, Functions, Sequences, Sums, and Matrices)

### Boolean Algebra

- ✦ **Boolean Functions: Slides (8)**
- ✦ **Representing Boolean Functions: Slides (9)**
- ✦ **Logic Gates: Slides (10)**
- ✦ **Minimization of Circuits: Slides (11)**

You Can read Chapter 12 Section 12.1, 12.2, 12.3 and 12.4 (Boolean Algebra)



## Basic Concepts of Graph Theory

- ✦ **Graphs and Graph Models: Slides (12)**
- ✦ **Graph Terminology and special Types of Graphs: Slides (13)**
- ✦ **Connectivity: Slides (14)**

You Can read Chapter 10 Section 10.1, 10.2 and 10.4 (Graphs)

### Exercises Number

1)	Introduction to Number System	Binary System: Slides (1) P255	1, 2, 4, 21
		Octal System: Slides (2) P255	5, 6, 17, 23(Just the sum)
		Hexadecimal System: Slides (3) P255	7, 8, 10, 11, 12, 24 (Just the sum)
2)	Logic	Propositional Logic: Slides (4) P 12	2, 3, 8(a,d,g), 11(a, c, e), 17, 28, 29(a-c), 31(c,e), 35(b,e)
		Propositional Equivalences: Slides (5) P 34	5, 7, 9(c), 10(c), 16, 19, 22
3)	Sets	Sets: Slides (6) P 125	1, 2(a, b), 5-8, 10, 19, 21, 27(b)
		Set operations: Slides (7) P136	4, 14, 15, 19, 25, 26, 50(a, b, c), 51(a, b, c), 52(a, b), 53(a, b)
4)	Boolean Algebra	Boolean Functions: Slides (8) P 818	1-4, 5(b), 9, 11, 20, 28
		Representing Boolean Functions: Slides (9) P 822	1-3
		Logic Gates: Slides (10) P 827	1-6
		Minimization of Circuits: Slides (11) P 841	1, 2, 3, 4(c), 5, 6(a, b), 12-14
5)	Basic Concepts of Graph Theory	Graphs and Graph Models: Slides (12) P 649	3-10
		Graph Terminology and special Types of Graphs: Slides (13) P 665	1-5, 20(a-d), 21-25, 36-41, 42(a-c)
		Connectivity: Slides (14) P 689	1-6