

CHAPTER OVERVIEW

10: Sets and Counting

Learning Objectives

In this chapter, you will learn to:

- Use set theory and Venn diagrams to solve counting problems.
- Use the Multiplication Axiom to solve counting problems.
- Use Permutations to solve counting problems.
- Use Combinations to solve counting problems.
- Use the Binomial Theorem to expand $(x + y)^n$

10.1: Sets and Venn Diagrams

10.1.1: Sets and Venn Diagrams (Exercises)

10.2: Tree Diagrams and the Multiplication Axiom

10.2.1: Tree Diagrams and the Multiplication Axiom (Exercises)

10.3: Permutations

10.3.1: Permutations (Exercises)

10.4: Circular Permutations and Permutations with Similar Elements

10.4.1: Circular Permutations and Permutations with Similar Elements (Exercises)

10.5: Combinations

10.5.1: Combinations (Exercises)

10.6: Combinations- Involving Several Sets

10.6.1: Combinations- Involving Several Sets (Exercises)

10.7: Binomial Theorem

10.7.1: Binomial Theorem (Exercises)

10.8: Chapter Review

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