



## What to know for the Chapter 12 Test

### Definitions

- Polyhedron
  - Tetrahedron
  - Hexahedron
  - Heptahedron
  - Decahedron
- Regular polyhedron
- Lateral Surface Area
- Total Surface Area
- Prism
  - Right Prism
  - Oblique Prism
  - Altitude of a Prism
- Pyramid
  - Base of a Pyramid
  - Lateral Faces of a Pyramid
  - Altitude of a Pyramid
- Sphere
- Hemisphere
- Cylinder
  - Radius of a Cylinder
  - Axis of a Cylinder
  - Right Cylinder
  - Oblique Cylinder
- Cone
  - Radius of a Cone
  - Altitude of a Cone
  - Right Cone
  - Oblique Cone
- Volume

### Postulates

- Surface Area of a Sphere



## Theorems

- Lateral Surface Area of a Cylinder (Theorem 111)
- Lateral Surface Area of a Cone (Theorem 112) Volume of a Prism or Cylinder (Theorem 113)
- Volume of a Pyramid or a Cone (Theorems 114 & 115)
- Ratio of Cross Sections of Pyramids and/or Cones (Theorem 116)
- Volume of a Sphere (Theorem 117)

## Problem Types

- Finding Lateral Surface Area and Total Surface Area of Prisms
- Finding Lateral Surface Area and Total Surface Area of Pyramids
- Finding the Lateral Surface Area and Total Surface Area of Cylinders
- Finding the Lateral Surface Area and Total Surface Area of Cones
- Finding the Surface Area of a Sphere
- Find the Lateral Surface Area and Total Surface Area of a hemisphere
- Finding the Volume of Prisms & Cylinders
- Finding the Volume of Pyramids & Cones
- Finding the Volume of Spheres
- Finding Surface Area and Volume of combined shapes (e.g., frustums, prisms & cylinders with holes cut out, spheres with slices cut out, an ice cream cone, etc.)
- Determining "surfaces of rotation"