SOLID MENSURATION

Mathematics

Instructor:
Engr. Albert A. Griño Jr

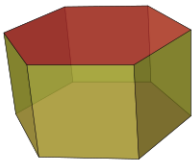
Solid Mensuration

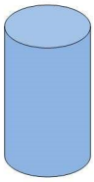
Mapua Institute of Technology

Prepared By: Albert A. Griño Jr

Chapter 8

Prism & Cylinder





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I. Prism

- **A. Definition**
- **B. Parts**
  - a. Base
  - b. Lateral Base
  - c. Lateral Edge
  - d. Height/Latitude
- **C. Example**
  - a. Special Type (Square & Rectangular)
  - b. Right Prism
  - c. Regular
  - d. Oblique
- **D. Properties**
- **E. Surface Area**
  - a. General LSA=Pe
  - b. Right Prism TSA=2B+LSA
- **F. Volume**
  - a. General V=Bh
  - b. Oblique Prism V=Bh=Re

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II. Cylinder

- **A. Definition**
- **B. Parts**
  - a. Base
  - b. Lateral Base
  - c. Altitude
- **C. Example**
  - a. Right
  - b. Oblique
- **D. Surface Area**
  - a. LSA=$2\pi rh$
  - b. TSA=2B + LSA = $2(\pi r^2)+2\pi rh=2\pi r(r+h)=C(r+h)$
- **E. Volume**
  - a. Right $V=\pi r^2 h$
  - b. Oblique V=Re

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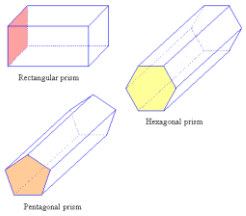
I. Prism

A. Definition:

Prism → a polygon with two congruent bases that lie in parallel planes and whose every section that is parallel to a base has the same area as that of the base



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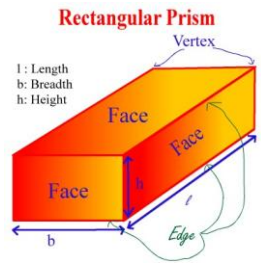
I. Prism

B. Parts

a. Base
b. Lateral Base
c. Lateral Edge
d. Height/Latitude



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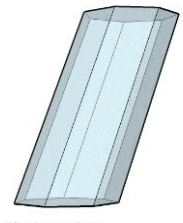
I. Prism

C. Example

a. Special Type (Square & Rectangular)
b. Right Prism
c. Regular
d. Oblique

D. Properties



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I. Prism

E. Surface Area

a. General LSA=Pe
b. Right Prism TSA=2B+LSA

F. Volume

a. General V=Bh
b. Oblique Prism V=Bh=Re

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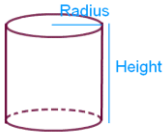
II. Cylinder

A. Definition:

A solid bounded by a closed cylindrical surface and two parallel planes cutting all the elements of the surface

B. Parts

a. Base
b. Lateral Base
c. Altitude



CYLINDER

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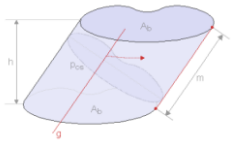
II. Cylinder

C. Example

a. Right
b. Oblique



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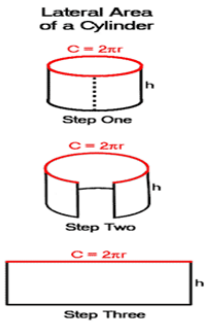
II. Cylinder

D. Surface Area

a. LSA=2πrh
b. TSA=2B + LSA = $2(\pi r^2)+2\pi rh=2\pi r(r+h)=C(r+h)$

E. Volume

a. Right $V=\pi r^2 h$
b. Oblique V=Re



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Exercises:

1. Page 96 Letter a & b
2. Page 97 Letter a & b
3. Page 95 Number 1
4. Page 99 Number 27
5. Page 99 Number 29