



Solid Mensuration

Miscellaneous Planes

Star Polygon – a star-like figure which generally consists of a polygon with triangles on its sides.



5-Pointed Star




6-Pointed Star

Solid Mensuration

Miscellaneous Planes

Example#1.
Determine the area of a regular 6-pointed star if the inner regular hexagon has 10 m on a side.

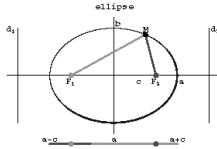


Ans. 519.60 m²

Solid Mensuration

Miscellaneous Planes

Elliptical Section
Ellipse – a conic with an eccentricity less than 1.



$$A = \pi ab$$

$$P = 2\pi \sqrt{\frac{a^2 + b^2}{2}}$$

Solid Mensuration

Miscellaneous Planes

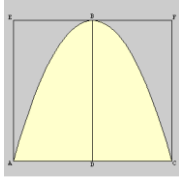
Example#2.
What is the perimeter of an ellipse with an area equal to 12π square units if the non opposite vertices are 5 units apart?

Ans. $P=22.21$ units

Solid Mensuration

Miscellaneous Planes

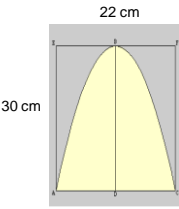
Parabolic Section
Parabola – a conic section which has an eccentricity greater than 1.



Solid Mensuration

Miscellaneous Planes

Example#3.
What is the area of a parabola inscribed in a rectangle 30 cm long and 22 cm wide?

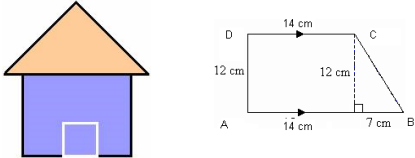


Ans. $A=440 \text{ cm}^2$

Solid Mensuration

Miscellaneous Planes

Composite Plane Figures
→ Is a plane figure made up of different geometric figures whose areas can be determined.





Solid Mensuration

Miscellaneous Planes

Example #4.

Find the area of the given figure shown below.

