

Space Figures and Cross Sections

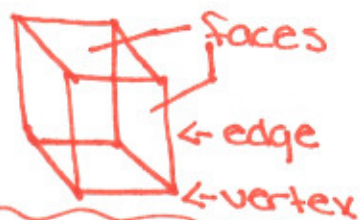
Ch. 11 Review

Section 1

Euler's formula

$$F + V = E + 2$$

face vertex edge



Cross Section



intersection of solid + a plane

Surface areas of prisms and cylinders

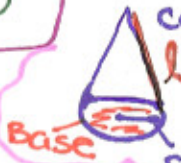
$L.A = ph$
 perimeter \cdot height of a prism
 $S.A = L.A + 2B$
 lateral area + 2 \cdot bases



$L.A = 2\pi r h$ or $L.A = \pi d h$
 $S.A = L.A + 2B$ or
 $S.A = 2\pi r h + 2\pi r^2$

Section 3

regular pyramid
 $L.A = \frac{1}{2} p l$
 $S.A = L.A + B$
 $l =$ slant height
 $B =$ base
 $l =$ height



$L.A = \frac{1}{2} \cdot 2\pi r l$ or
 $L.A = \pi r l$
 $S.A = L.A + B$
 radius

Surface Areas of pyramids and cones

Volume of a cylinder
 $V = Bh$, or $V = \pi r^2 h$



Composite space figure - you can find the volume by adding the volumes of the figures combined

Section 4

Volumes of prisms and cylinders
 Volume of a prism
 $V = BH$



Volume of a pyramid
 $V = \frac{1}{3} Bh$



Section 5

Volumes of pyramids and cones
 oblique pyramid



Volume of a sphere
 $V = \frac{4}{3} \pi r^3$



Volume of a cone
 $V = \frac{1}{3} Bh$, or $V = \frac{1}{3} \pi r^2 h$



Section 6

Surface areas and volumes of spheres
 $S.A = 4\pi r^2$

