

Surface Area and Volume

1. Euler's Theorem: $V + F = E + 2$

a) A solid has 5 faces and 6 vertices. How many edges does it have?

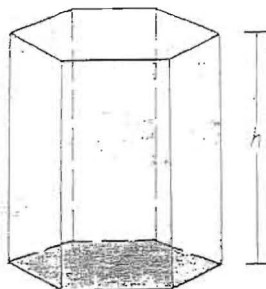
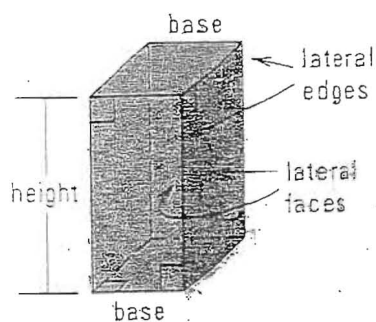
b) A solid has 8 faces, 2 hexagons and 6 squares. How many vertices does it have?

2. Right Prism -

$$S = 2B + Ph$$

Rectangular Prism -

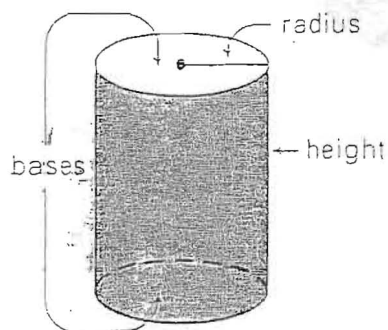
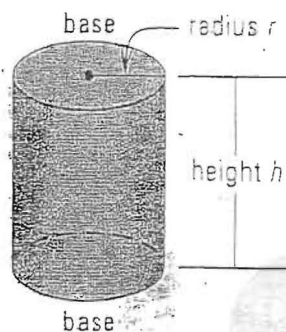
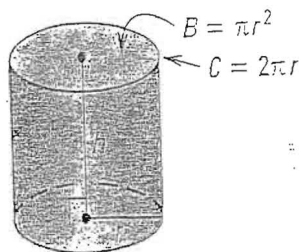
$$V = Bh$$



3. Right Cylinder -

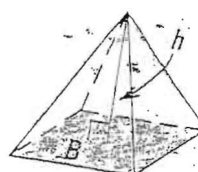
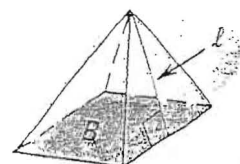
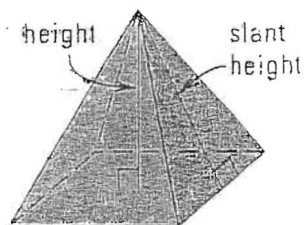
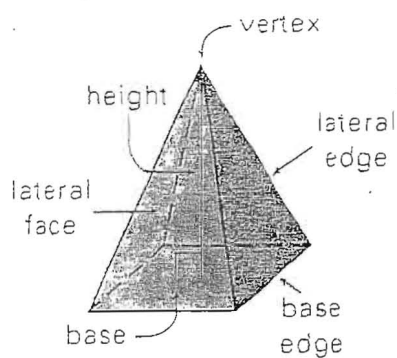
$$S = 2\pi r^2 + 2\pi r h$$

$$V = \pi r^2 h$$



4. Regular Pyramid - $S = B + \frac{1}{2} P \ell$

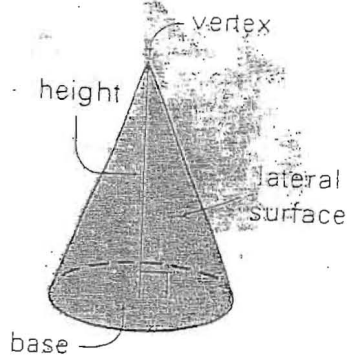
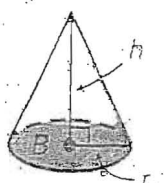
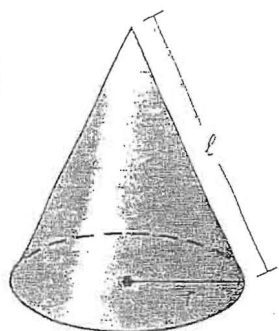
Right Pyramid - $V = \frac{1}{3} B h$



5. Right Cone -

$S = \pi r^2 + \pi r \ell$

$V = \frac{1}{3} \pi r^2 h$



6. Sphere -

$S = 4\pi r^2$

$V = \frac{4}{3} \pi r^3$

