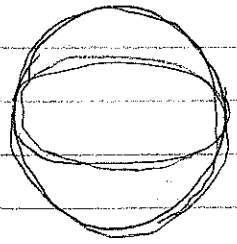
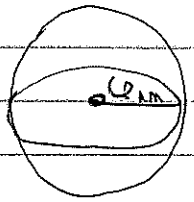
8.3 Volume of Spheres



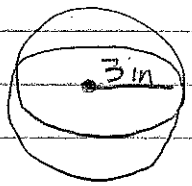
$V = \frac{4}{3}\pi r^3$

$\frac{4 \cdot \pi \cdot r^3}{3}$



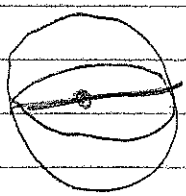
$V = \frac{4 \cdot 3.14 \cdot 6 \cdot 6 \cdot 6}{3}$

$V = 904.32 \text{ mm}^3$



$V = \frac{4 \times 3.14 \times 3 \times 3 \times 3}{3}$

$V = 113.04 \text{ in}^3$



$V = \frac{4 \times 3.14 \times 4 \times 4 \times 4}{3}$

$V = 267.9 \text{ ft}^3$

- diameter 10 in
- pump inflates ball 325 cubic inches at a rate of

$$= \frac{4 \times 3.14 \times 5 \times 5 \times 5}{3}$$

$$= 523.3 \text{ in}^3$$

$$= \frac{523.3}{325}$$

$$= 1.6$$

Volume of Hemisphere

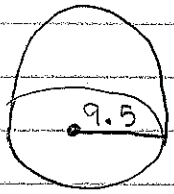
↓

$\frac{1}{2}$ of a sphere

$V = \frac{4 \times 3.14 \times 11 \times 11 \times 11}{3}$ (1ST)

$\frac{5572.5}{2}$ (2nd)

$V = 2786.2$



$V = \frac{4 \times 3.14 \times 9.5^3}{3}$

$= \frac{3589.5}{2}$

$V = 1794.8$

$\frac{1}{2}\left(\frac{H}{3} \cdot \pi r^3\right)$

FORMULA