

Solid Volumes

*Cork Plug^{max}

$$\left(\frac{\pi}{4} - \frac{1}{3}\right) D^3 = 0.4521$$

0.2618	0.3927	0.5236	0.7854	1.000
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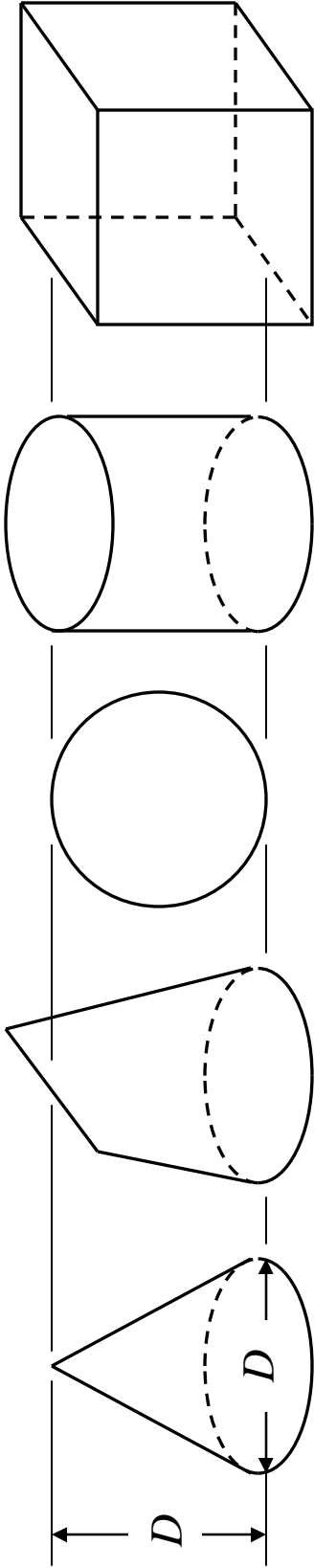
$$\frac{\pi}{12} D^3$$

$$\frac{\pi}{8} D^3$$

$$\frac{\pi}{6} D^3$$

$$\frac{\pi}{4} D^3$$

$$D^3$$



*Cork Plug^{min}
Triangular Sections

Cone

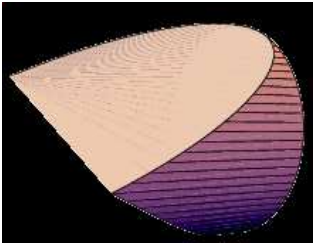
Sphere

Cylinder

Cube

Archimedes' Tombstone: Cylinder = Cone + Sphere

(or two Cork Plugs!)



* Gardner, M. "The Cork Plug." Ch. 5 in [The Second Scientific American Book of Puzzles & Diversions: A New Selection](#). New York: Simon and Schuster, pp. 52-59, 1961.