

3.26 Regular Pyramid

Side of base: a

Lateral edge: b

Height: h

Slant height: m

Number of sides: n

Semiperimeter of base: p

Radius of inscribed sphere of base: r

Area of base: S_B

Lateral surface area: S_L

Total surface area: S

Volume: V

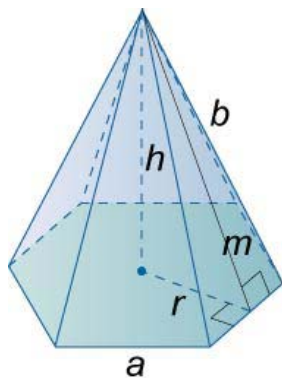


Figure 41.

$$292. \quad m = \sqrt{b^2 - \frac{a^2}{4}}$$

$$293. \quad h = \frac{\sqrt{4b^2 \sin^2 \frac{\pi}{n} - a^2}}{2 \sin \frac{\pi}{n}}$$

$$294. \quad S_L = \frac{1}{2} n a m = \frac{1}{4} n a \sqrt{4b^2 - a^2} = p m$$

295. $S_B = pr$

296. $S = S_B + S_L$

297. $V = \frac{1}{3}S_B h = \frac{1}{3}prh$