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

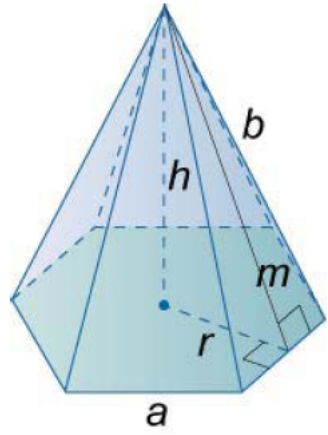

Figure 41.

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

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

294. $$S_L = \frac{1}{2} nam = \frac{1}{4} na\sqrt{4b^2 - a^2} = pm$$

295. $$S_B = pr$$

296. $$S = S_B + S_L$$

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