3.38 Spherical Wedge

Radius: R
Dihedral angle in degrees: x
Dihedral angle in radians: α
Area of spherical lune: S_L
Total surface area: S
Volume: V

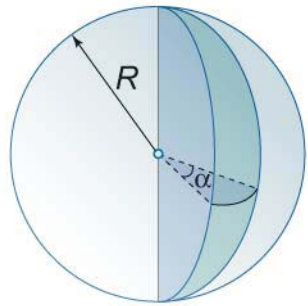

Figure 55.

352. $S_L = \frac{\pi R^2}{90}\alpha = 2R^2 x$

353. $S = \pi R^2 + \frac{\pi R^2}{90}\alpha = \pi R^2 + 2R^2 x$

354. $V = \frac{\pi R^3}{270}\alpha = \frac{2}{3}R^3 x$