If the ratio of the radii of two spheres is 2:3, find the ratio of their Volumes.

ANSWER

Given the ratio of radii of two sphere is $2:3$

Let the radius of two-sphere is $2r$ and $3r$

Then the ratio of the surface area of two spheres $=4\pi(2r)^2 : 4\pi(3r)^2$

$\Rightarrow 4:9$

Then ratio of volume of two spheres=

$\dfrac{4}{3}\pi(2r)^3 : \dfrac{4}{3}\pi(3r)^3$

$\Rightarrow 8:27$