

L5 Area of Spheres



Formulas:

	A_L (Lateral Area)	$A_T = A_L + A_b$ (Only hemispheres have a base)
Spheres	$4\pi r^2$	
Hemispheres	$2\pi r^2$	$3\pi r^2$

1

	$A_L = A_T \text{ Sphere}$ (Lateral Area)	$A_T = A_L + A_b$ (only hemispheres have a base)
	$4\pi r^2$	$2\pi r^2 + \pi r^2$

Ex 1: A Tennis ball has diameter 6 cm. What is its surface area?



2

	$A_L = A_T \text{ Sphere}$ (Lateral Area)	$A_T = A_L + A_b$ (only hemispheres have a base)
	$4\pi r^2$	$2\pi r^2 + \pi r^2$

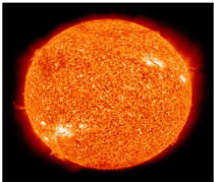
Ex 2: A soccer ball with diameter 30 cm is placed tightly inside a cube box. Find the difference between their surface areas.



3

	$A_L = A_T \text{ Sphere}$ (Lateral Area)	$A_T = A_L + A_b$ (only hemispheres have a base)
	$4\pi r^2$	$2\pi r^2 + \pi r^2$

Ex 3: How many times greater is the SA of the Sun than the Earth?



$d_s = 1\,391\,000 \text{ km}$
 $r = 695\,500$



$d_e = 12\,756 \text{ km}$ $r = 6\,378$

Practice:
5.5 Set 3



5