Sphere

Surface area of sphere= $4\pi r^2$

Volume of sphere= $^4/_3\ \pi r^3$

Q1 Find the surface area of the sphere.
a) If radius is 7 cm

b) If diameter is 14 cm

c) If radius is 5.5 cm

d) If diameter is 8

e) If diameter is 19 m

Q2. Find the volume of the sphere.
a) If radius is 12 cm

b) If diameter is 15 cm

c) If radius is 6.5 cm

d) If diameter is 9

e) If diameter is 13 m

Q3. Find the unknown quantity of the following spheres.

Radius or Diameter	Surface area	Volume
15 cm		
	17 cm^2	
		35 cm^3
2 cm		
		45 cm^3

Q4. A metal sphere of radius 15 cm is melted down and recast into a solid cylinder of radius 6 cm. Calculate the height of the cylinder.

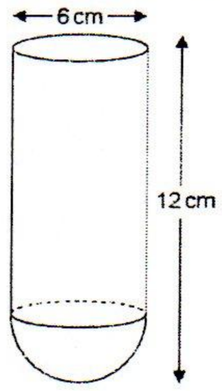
Lead has a density of 11.35 g/cm^3. Calculate the maximum number of shot (spherical lead pellets) of radius 1.5 mm which can be made from 1 kg of lead.
Calculate, correct to one decimal place, the radius of a sphere
a whose surface area is 150 cm^2

b whose volume is 150 cm^3.

Q5. Find the radius of the sphere when volume is known give your answer to nearest 1 decimal place) Volume is 144

Q6.Find the radius of sphere if surface area is known. Estimate your answer using 1 decimal place.
a) Surface area of the sphere is 125 cm^2

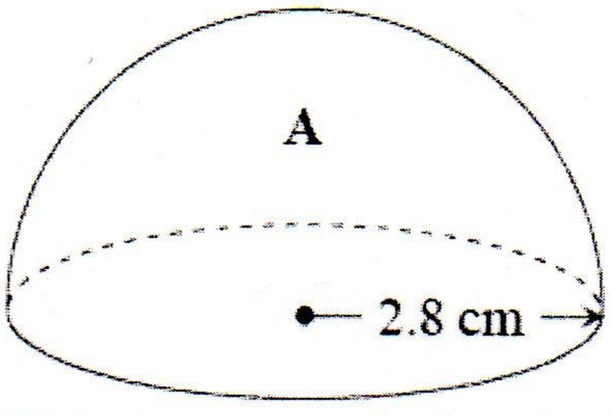
A test tube is formed from a cylinder and a hemisphere as shown.
Work out the total volume of the test tube.



Q7. Find the volume of hemisphere having the radius of 5 cm.

Q8. Find the surface area of the hemisphere having the diameter of 8 cm.

Q9. A solid hemisphere **A** has a radius of 2.8 cm.
(a) Calculate the **total** surface area of hemisphere **A**.
Give your answer correct to 3 significant figures.
..... cm^2



Q10. A larger solid hemisphere **B** has a **volume** which is 125 times the volume of hemisphere **A**.
(b) Calculate the **total** surface area of hemisphere **B**.
Give your answer correct to 3 significant figures.
..... cm^2