Name _____   Date _____   Period _____

Spheres Surface Area and Volume Worksheet

1)   A sphere has a radius of 8 cm. Find its volume and surface area.
       Give your answers to 3 significant figures. Use $\pi = 3.142$

2)   A hemispherical bowl has a radius of 15 cm. It is filled completely with
       water and covered with a lid.
       (a)   Find the volume of the water.
       (b)   Find the surface area of the bowl (including the lid).
       Give your answers to 3 significant figures. Use $\pi = 3.142$

3)   A bowl has the form of a hollow hemisphere with a radius of 8.4 cm.
       Find the external surface area and the volume of the bowl.
       Give your answers to 3 significant figures. Use $\pi = 3.142$

4)   Find the surface area of a sphere whose volume is 288π cm³.
       Give your answer to 3 significant figures. Use $\pi = 3.142$

5)   Find the volume of an open hemisphere whose external surface area is 1762 cm².
Give your answer to 3 significant figures. Use $\pi = 3.142$

6)   The surface area of a closed hemisphere is given as 618 cm².
     (a)   Find the radius of the hemisphere.
     (b)   Find the volume of the hemisphere.
     (c)   Find the external surface area of the hemisphere if it were hollow.
     Give your answers to 3 significant figures. Use $\pi = 3.142$

7)   A hemispherical bowl has a radius of 10 cm.
     (a)   Find the volume of the bowl.
     (b)   Find the external surface area of the bowl.
     (c)   A cylinder of radius 7 cm and height h cm has the same volume as
                  the bowl. Calculate the value of h.
     Give your answers to 3 significant figures. Use $\pi = 3.142$