NAME:_____

1. Find the surface area of a sphere that has a diameter of 10 centimeters. Express your answer in terms of π.

2. A sphere has a radius of 9 centimeters. Find the volume and surface area of the sphere.

3. A sphere has a radius of 6 meters. Find the volume and surface area of the sphere.

4. A sphere has a volume of 2304π cubic inches. Find the surface area of the sphere.

5. A sphere has a volume of 7776π cubic inches. Find the surface area of the sphere.

6. Find a shortcut for determining the surface area of a sphere if you know its volume.

[1] 100π cm^2

[2] 972π cm^3, 324π cm^2

[3] 288π m^3, 144π m^2

[4] 576π square inches

[5] 1296π square inches

[6] Because the ratio of the volume to the surface area of a sphere is $\frac{4}{3}\pi r^2 : 4\pi r^2$, or $\frac{r}{3}$, you can divide the volume by the quantity $\frac{r}{3}$ to find the surface area.