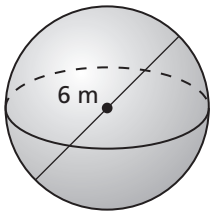
Name_____ Date _____

11.7 Practice B

In Exercises 1–3, find the surface area of the sphere or hemisphere.

1.



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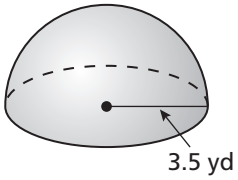
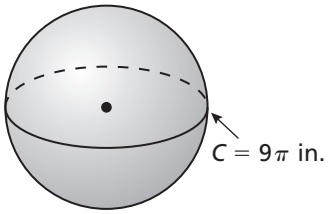


3.



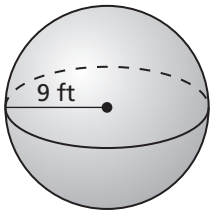
In Exercises 4 and 5, find the indicated measure.

4. Find the radius of a sphere with a surface area of 100π square.

5. Find the diameter of a sphere with a surface area of 6.25π square inches.

In Exercises 6–8, find the volume of the sphere or hemisphere.

6.



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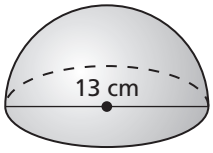
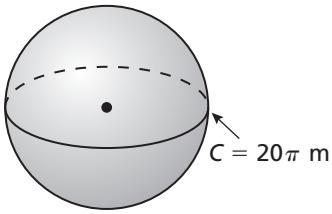


8.



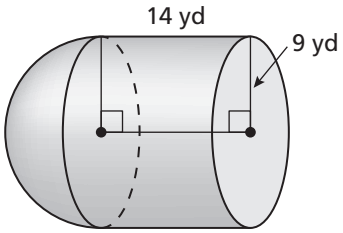
In Exercises 9 and 10, find the volume of the sphere with the given surface area.

9. Surface Area $= 144\pi$ ft^2

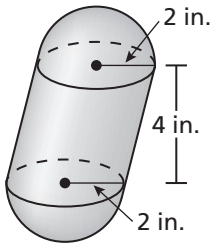
10. Surface Area $= \pi$ mi^2

In Exercises 11 and 12, find the volume of the composite solid.

11.



12.



13. The diameter of a spherical balloon shrinks to one-half of its original size. Describe how the surface area and volume of the balloon change.

14. A museum has two spherical cannonballs on display. Each cannonball is made of a type of iron that weighs about 463 pounds per cubic foot.

a. The diameter of the smaller cannonball is 1 inch less than the diameter of the larger cannonball. Can you determine how much less the smaller cannonball weighs than the larger cannonball? Explain your reasoning.

b. The smaller cannonball displaces 33.5 cubic inches of water when dropped in a bucket full of water. To the nearest pound, how much less does the smaller cannonball weigh than the larger cannonball?