Name_____ Date_____

In Exercises 13–15, rewrite the expression in rational exponent form.

13. $\left(\sqrt[5]{4}\right)^3$

14. $\left(\sqrt[3]{-8}\right)^2$

15. $\left(\sqrt[4]{15}\right)^7$

In Exercises 16–18, rewrite the expression in radical form.

16. $(-3)^{2/5}$

17. $6^{3/2}$

18. $12^{3/4}$

In Exercises 19–24, evaluate the expression.

19. $32^{2/5}$

20. $(-64)^{3/2}$

21. $343^{2/3}$

22. $256^{7/8}$

23. $-729^{5/6}$

24. $(-625)^{3/4}$

25. The radius r of a sphere is given by the equation

$$r = \left(\frac{A}{4\pi}\right)^{1/2}$$

where A is the surface area of the sphere. The surface area of a sphere is 1493 square meters. Find the radius of the sphere to the nearest tenth of a meter. Use 3.14 for π.