Name _____ Class _____ Date _____

7-5 Practice

Form G

Rational Exponents and Radicals

What is the value of each expression?

1. $\sqrt[3]{64}$
2. $\sqrt[3]{125}$
3. $\sqrt[5]{32}$
4. $\sqrt{100}$
5. $\sqrt[4]{1}$
6. $\sqrt{225}$
7. $\sqrt[3]{729}$
8. $\sqrt{289}$
9. $\sqrt[3]{243}$

Write each expression in radical form.

10. $b^{\frac{3}{2}}$
11. $(36x)^{\frac{1}{2}}$
12. $25y^{\frac{1}{2}}$
13. $81s^{\frac{2}{3}}$
14. $(72b)^{\frac{1}{2}}$
15. $(125a)^{\frac{2}{3}}$
16. $(40x)^{\frac{1}{3}}$
17. $36t^{\frac{1}{4}}$
18. $(99r)^{\frac{1}{2}}$

Write each expression in exponential form.

19. $\sqrt[3]{b^4}$
20. $\sqrt{(3x)^4}$
21. $\sqrt[3]{125d^4}$
22. $\sqrt{49a}$
23. $\sqrt[3]{(64b)^2}$
24. $\sqrt[4]{256b^5}$
25. $\sqrt{144d^4}$
26. $\sqrt[3]{(27x)^2}$
27. $\sqrt{625a^5}$

28. You can use the formula $S = 10m^{\frac{2}{3}}$ to approximate the surface area S, in square centimeters, of a horse with mass m, in grams. What is the surface area of a horse with a mass of 4.5×10^5 grams? Round your answer to the nearest whole square centimeter.