

Answer Key

Lesson 5.1

Practice Level C

1–8. Check properties. 1. 25 2. 2187

3. 1024 4. 256 5. $\frac{64}{27}$ 6. 729 7. $\frac{512}{19,683}$

8. $\frac{1}{125}$ 9. 2.139×10^5 10. 9.72×10^{-6}

11. 1.6×10^5 12. 2.0×10^{-3} 13. 1.0×10^{-6}

14. 2.5×10^1 15–22. Check properties. 15. x^6

16. $-\frac{2m^7}{n^6}$ 17. $\frac{45c^{13}}{d^5}$ 18. 1 19. $\frac{9}{x^{14}y^2}$ 20. $\frac{27r^6}{q^3s^3}$

21. $\frac{1}{z^{12}}$ 22. b^{18} 23. Sample answer: $a^4b^4c^5$

24. Sample answer: $6x^3y^4z$ 25. Sample answer:

$16m^6n^{17}$ 26. about 1.665×10^{25} 27. a. $\frac{2}{3}$ b. $\frac{\pi}{6}$

c. Sample answer: The designer should choose the package shaped like a cube. There is more empty air space around the ornament to offer more protection from damage. Also, the cubic packages would fit more efficiently in a box for shipping.