

1-4**Practice: Skills*****Powers and Exponents***

Write each expression in words.

1. 7^2

2. 8^3

3. 4^4

4. 5^6

Write each product using an exponent. Then find the value of the power.

5. $4 \cdot 4 \cdot 4 \cdot 4$

6. $3 \cdot 3 \cdot 3 \cdot 3$

7. $5 \cdot 5 \cdot 5 \cdot 5$

8. $7 \cdot 7$

9. $3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$

10. $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$

11. $6 \cdot 6 \cdot 6$

12. $6 \cdot 6 \cdot 6 \cdot 6$

Write each power as a product. Then find the value of the product.

13. 3^8

14. 2^5

15. 8^3

16. 10^5

17. 6^2

18. 7^4

19. 2^3

20. 3^5

21. 6^5

22. 2^7

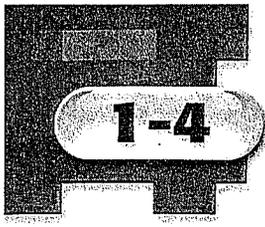
Write the prime factorization of each number using exponents.

23. 54

24. 36

25. 63

26. 245

**1-4****Practice: Word Problems*****Powers and Exponents***

<p>1. SPACE The Sun is about $10 \cdot 10$ million miles away from Earth. Write $10 \cdot 10$ using an exponent. Then find the value of the power. How many miles away is the Sun?</p>	<p>2. WEIGHT A 100-pound person on Earth would weigh about $4 \cdot 4 \cdot 4 \cdot 4$ pounds on Jupiter. Write $4 \cdot 4 \cdot 4 \cdot 4$ using an exponent. Then find the value of the power. How much would a 100-pound person weigh on Jupiter?</p>
<p>3. ELECTIONS In the year 2000, the governor of Washington, Gary Locke, received about 10^6 votes to win the election. Write this as a product. How many votes did Gary Locke receive?</p>	<p>4. SPACE The diameter of Mars is about 9^4 kilometers. Write 9^4 as a product. Then find the value of the product.</p>
<p>5. SPACE The length of one day on Venus is 3^5 Earth days. Express this exponent as a product. Then find the value of the product:</p>	<p>6. GEOGRAPHY The area of San Bernardino County, California, the largest county in the U.S., is about 3^9 square miles. Write this as a product. What is the area of San Bernardino County?</p>
<p>7. GEOMETRY The volume of the block shown can be found by multiplying the width, length, and height. Write the volume using an exponent. Find the volume.</p>	<p>8. SPACE A day on Jupiter lasts about 10 hours. Write a product and an exponent to show how many hours are in 10 Jupiter days. Then find the value of the power.</p>

