

1.2**Practice**

For use with pages 10-13

Write the product using an exponent.

1. $43 \cdot 43 \cdot 43 \cdot 43$

43^4

2. $100 \cdot 100 \cdot 100$

100^3

3. $x \cdot x \cdot x$

x^3

4. $p \cdot p \cdot p \cdot p \cdot p$

p^5

Evaluate the expression when $n = 8$ and $n = 0.3$.

5. n^2

$8^2 = 8 \cdot 8 = 64$

6. n^3

$8^3 = 8 \cdot 8 \cdot 8 = 512$

7. n^4

$8^4 = 4096$

$0.3^2 = 0.3 \cdot 0.3 = 0.09$

$0.3^3 = 0.3 \cdot 0.3 \cdot 0.3 = 0.027$

$0.3^4 = 0.0081$

8. n^6

$8^6 = 262144$

9. n^8

$8^8 = 16,777,216$

10. n^7

$8^7 = 2,097,152$

$0.3^6 = 0.000729$

$(0.3)^8 = 0.00006561$

$(0.3)^7 = 0.0002187$

Write the power in words and as a repeated multiplication. Then evaluate the power.

11. 9^6

12. 16^4

16 to the 4th power

$16 \cdot 16 \cdot 16 \cdot 16 = 65536$

13. 2.5^4

14. 1.4^3

1.4 to the 3rd power (or 1.4 cubed)

$1.4 \cdot 1.4 \cdot 1.4 = 2.744$

Evaluate the expression when $x = 0.64$ and $y = 15$.

15. x^3

16. x^2

$(0.64)^2 = 0.4096$

17. x^1

18. y^3

19. y^4

20. y^5

$15^3 = 3375$

$15^5 = 759,375$

1.2

Continued

Practice

For use with pages 10-13

Find the area of the square.

21.



17 in.

22.



22 ft

23.



2.5 m

24.



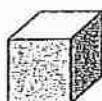
0.6 cm

$$A = 22^2 = 484 \text{ ft}^2$$

$$A = (0.6)^2 = 0.36 \text{ cm}^2$$

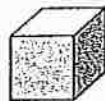
Find the volume of the cube.

25.



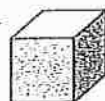
0.9 yd

26.



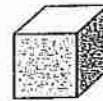
1.3 ft

27.



30 cm

28.



18 mm

$$V = 1.3^3 = 2.197 \text{ ft}^3$$

$$V = 18^3 = 5832 \text{ mm}^3$$

29. Compare each number in the top row of the table with the number below it. Describe any pattern you see. Complete the table with a variable expression involving n .

1	2	3	4	...	n
1	16	81	256	...	