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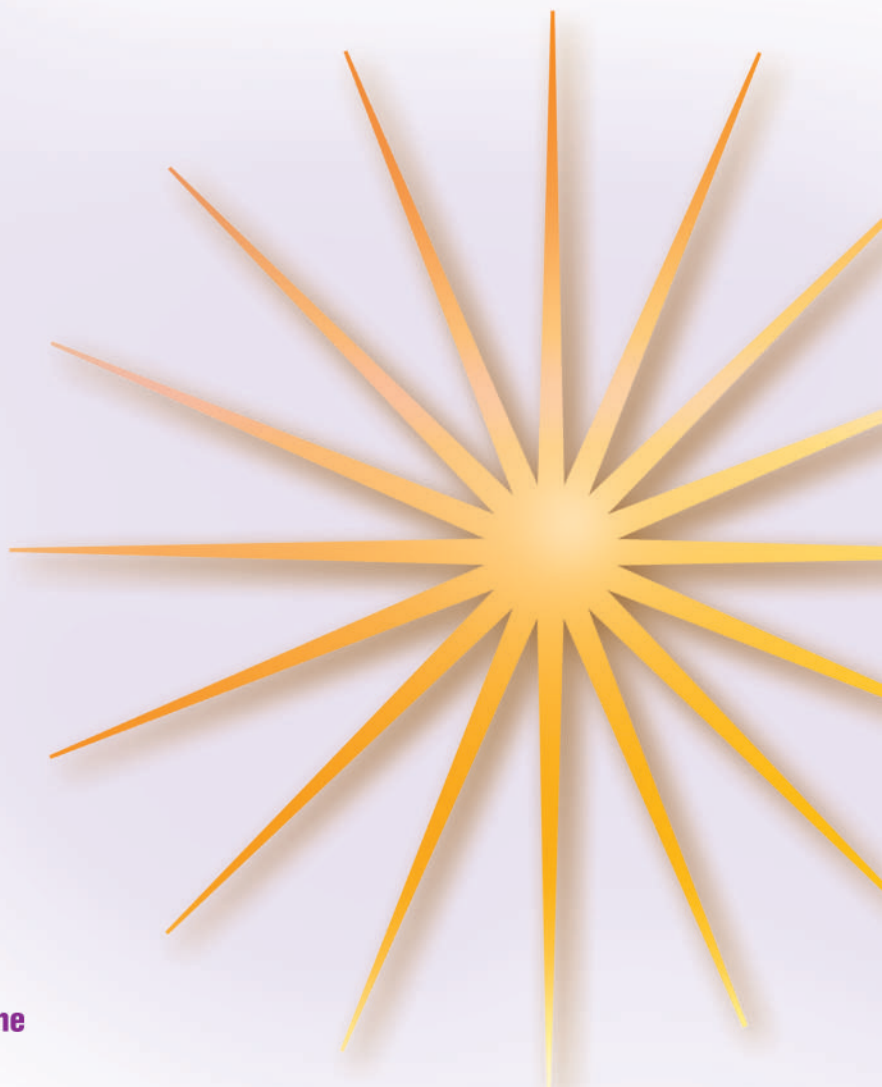
# Math

GRADE  
**8**



## Focused Practice for Math Mastery

- Rational and irrational numbers
- Linear equations
- Pythagorean Theorem
- Geometry in the coordinate plane
- Probability and statistics
- Answer key



**SPECTRUM<sup>®</sup>**

**Math**

**Grade 8**

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# Check What You Know

## Integers and Exponents

Find the value of each expression.

**a**

1.  $7^3 =$  \_\_\_\_\_

2.  $9^4 =$  \_\_\_\_\_

3.  $4^{-3} =$  \_\_\_\_\_

4.  $2^{-5} =$  \_\_\_\_\_

5.  $7^4 =$  \_\_\_\_\_

**b**

$8^5 =$  \_\_\_\_\_

$1^5 =$  \_\_\_\_\_

$3^{-5} =$  \_\_\_\_\_

$9^{-3} =$  \_\_\_\_\_

$3^{-4} =$  \_\_\_\_\_

**c**

$4^2 =$  \_\_\_\_\_

$6^8 =$  \_\_\_\_\_

$7^{-4} =$  \_\_\_\_\_

$10^{-3} =$  \_\_\_\_\_

$5^9 =$  \_\_\_\_\_

Rewrite each multiplication or division expression using a base and an exponent.

6.  $4^5 \div 4^2 =$  \_\_\_\_\_

$6^{-5} \times 6^3 =$  \_\_\_\_\_

$8^{-4} \div 8^{-2} =$  \_\_\_\_\_

7.  $9^{11} \div 9^6 =$  \_\_\_\_\_

$5^{-3} \times 5^{-1} =$  \_\_\_\_\_

$3^{-6} \div 3^4 =$  \_\_\_\_\_

8.  $8^2 \times 8^3 =$  \_\_\_\_\_

$6^4 \times 6^7 =$  \_\_\_\_\_

$4^{-2} \div 4^{-5} =$  \_\_\_\_\_

9.  $7^6 \div 7^3 =$  \_\_\_\_\_

$4^8 \times 4^3 =$  \_\_\_\_\_

$9^5 \times 9^6 =$  \_\_\_\_\_

10.  $2^9 \div 2^{-3} =$  \_\_\_\_\_

$3^8 \div 3^2 =$  \_\_\_\_\_

$12^4 \times 12^{10} =$  \_\_\_\_\_

11.  $5^4 \times 5^2 =$  \_\_\_\_\_

$10^7 \div 10^4 =$  \_\_\_\_\_

$11^3 \times 11^4 =$  \_\_\_\_\_

12.  $7^5 \div 7^2 =$  \_\_\_\_\_

$6^6 \times 6^3 =$  \_\_\_\_\_

$12^4 \div 12^2 =$  \_\_\_\_\_



# Check What You Know

## Integers and Exponents

Rewrite each in standard notation.

**a**

**13.**  $9.545 \times 10^3$

\_\_\_\_\_

**14.**  $8.124 \times 10^6$

\_\_\_\_\_

**15.**  $1.0428 \times 10^4$

\_\_\_\_\_

**16.**  $2.396 \times 10^5$

\_\_\_\_\_

**17.**  $3.957 \times 10^2$

\_\_\_\_\_

**b**

$8.596 \times 10^{-3}$

\_\_\_\_\_

$8.743 \times 10^4$

\_\_\_\_\_

$7.8543 \times 10^{-2}$

\_\_\_\_\_

$8.352 \times 10^{-6}$

\_\_\_\_\_

$9.389 \times 10^6$

\_\_\_\_\_

**c**

$9.318 \times 10^{-3}$

\_\_\_\_\_

$2.961 \times 10^5$

\_\_\_\_\_

$4.937 \times 10^{-4}$

\_\_\_\_\_

$3.85 \times 10^7$

\_\_\_\_\_

$4.109 \times 10^{-5}$

\_\_\_\_\_

Rewrite each in scientific notation.

**18.** 0.4537

\_\_\_\_\_

**19.** 0.7614

\_\_\_\_\_

**20.** 892,320

\_\_\_\_\_

**21.** 783,000

\_\_\_\_\_

**22.** 53,890,000

\_\_\_\_\_

0.006686

\_\_\_\_\_

0.01087

\_\_\_\_\_

428,200

\_\_\_\_\_

0.0004642

\_\_\_\_\_

4,183,200,000

\_\_\_\_\_

133,300

\_\_\_\_\_

517,700

\_\_\_\_\_

0.01283

\_\_\_\_\_

478,200,000

\_\_\_\_\_

0.00028737

\_\_\_\_\_

## Lesson 1.1 Using Exponents

A **power** of a number represents repeated multiplication of the number by itself.

$6^4 = 6 \times 6 \times 6 \times 6$  and is read *6 to the fourth power*.

In exponential numbers, the **base** is the number that is multiplied, and the **exponent** represents the number of times the base is used as factor. In  $6^4$ , 6 is the base and 4 is the exponent.

$5^5$  means 5 is used as a factor 5 times.

$$5 \times 5 \times 5 \times 5 \times 5 = 3,125 \qquad 5^5 = 3,125$$

Write each power as a product of the factors.

- | a                 | b           | c           |
|-------------------|-------------|-------------|
| 1. $3^3$ _____    | $5^5$ _____ | $6^1$ _____ |
| 2. $2^{12}$ _____ | $3^8$ _____ | $3^6$ _____ |
| 3. $4^7$ _____    | $4^4$ _____ | $8^3$ _____ |

Use exponents to rewrite these expressions.

- | a   | b                                    |
|---|--------------------------------------|
| 4. $24 \times 24 \times 24$ _____                         | $2 \times 2 \times 2 \times 2$ _____ |
| 5. $3 \times 3 \times 3 \times 3 \times 3$ _____          | $5 \times 5$ _____                   |
| 6. $5 \times 5 \times 5 \times 5 \times 5 \times 5$ _____ | $4 \times 4 \times 4$ _____          |

Find the value of each expression.

- | a                | b             | c              |
|------------------|---------------|----------------|
| 7. $8^3 =$ _____ | $9^4 =$ _____ | $10^2 =$ _____ |



## Lesson 1.1 Using Exponents

Write each power as a product of the factors.

**a****b****c**

1.  $9^2$  \_\_\_\_\_

$58^1$  \_\_\_\_\_

$4^3$  \_\_\_\_\_

2.  $5^4$  \_\_\_\_\_

$8^2$  \_\_\_\_\_

$3^4$  \_\_\_\_\_

3.  $75^2$  \_\_\_\_\_

$6^2$  \_\_\_\_\_

$10^{10}$  \_\_\_\_\_

Use exponents to rewrite these expressions.

**a****b**

4.  $8$  \_\_\_\_\_

$13 \times 13$  \_\_\_\_\_

5.  $6 \times 6 \times 6 \times 6$  \_\_\_\_\_

$5 \times 5 \times 5 \times 5$  \_\_\_\_\_

6.  $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$  \_\_\_\_\_

$3 \times 3 \times 3$  \_\_\_\_\_

7.  $86 \times 86 \times 86$  \_\_\_\_\_

$4 \times 4 \times 4 \times 4 \times 4$  \_\_\_\_\_

8.  $10 \times 10 \times 10 \times 10 \times 10$  \_\_\_\_\_

$15 \times 15 \times 15 \times 15 \times 15$  \_\_\_\_\_

Find the value of each expression.

**a****b****c**

9.  $7^1 =$  \_\_\_\_\_

$3^4 =$  \_\_\_\_\_

$10^5 =$  \_\_\_\_\_

10.  $7^5 =$  \_\_\_\_\_

$5^3 =$  \_\_\_\_\_

$8^4 =$  \_\_\_\_\_

11.  $4^2 =$  \_\_\_\_\_

$2^5 =$  \_\_\_\_\_

$9^7 =$  \_\_\_\_\_

12.  $6^4 =$  \_\_\_\_\_

$12^3 =$  \_\_\_\_\_

$7^3 =$  \_\_\_\_\_

## Lesson 1.2 Equivalent Expressions with Exponents

To multiply powers with the same base, combine bases, add the exponents, then simplify.

$$2^2 \times 2^3 = 2^{2+3} = 2^5 = 32$$

To divide powers with the same base, combine bases, subtract the exponents, then simplify.

$$3^5 \div 3^2 = 3^{5-2} = 3^3 = 27$$

Find the value of each expression.

**a****b****c**

1.  $7^2 =$  \_\_\_\_\_

$8^3 =$  \_\_\_\_\_

$4^3 =$  \_\_\_\_\_

2.  $10^2 =$  \_\_\_\_\_

$9^4 =$  \_\_\_\_\_

$11^5 =$  \_\_\_\_\_

3.  $17^3 =$  \_\_\_\_\_

$5^6 =$  \_\_\_\_\_

$6^4 =$  \_\_\_\_\_

4.  $21^3 =$  \_\_\_\_\_

$16^4 =$  \_\_\_\_\_

$12^5 =$  \_\_\_\_\_

Rewrite each expression as one base and one exponent. Then, find the value.

5.  $8^2 \times 8^3 =$  8<sup>5</sup>; 32768

$3^3 \times 3^3 =$  \_\_\_\_\_

$2^2 \times 2^2 =$  \_\_\_\_\_

6.  $7^4 \div 7^2 =$  \_\_\_\_\_

$9^5 \div 9^3 =$  \_\_\_\_\_

$16^4 \div 16^2 =$  \_\_\_\_\_

7.  $6^4 \times 6^1 =$  \_\_\_\_\_

$4^4 \times 4^2 =$  \_\_\_\_\_

$3^2 \times 3^2 =$  \_\_\_\_\_

8.  $10^6 \div 10^4 =$  \_\_\_\_\_

$8^3 \div 8^2 =$  \_\_\_\_\_

$7^6 \div 7^3 =$  \_\_\_\_\_

9.  $5^3 \times 5^2 =$  \_\_\_\_\_

$10^3 \times 10^4 =$  \_\_\_\_\_

$15^2 \times 15^1 =$  \_\_\_\_\_

10.  $2^8 \div 2^3 =$  \_\_\_\_\_

$3^9 \div 3^7 =$  \_\_\_\_\_

$6^6 \div 6^3 =$  \_\_\_\_\_

## Lesson 1.2 Equivalent Expressions with Exponents

Rewrite each multiplication or division expression using a base and an exponent.

**a****b**

1.  $4^3 \times 4^5 =$  \_\_\_\_\_

$9^2 \times 9^3 =$  \_\_\_\_\_

2.  $(3 \times 3 \times 3) \times (3 \times 3) =$  \_\_\_\_\_

$5^6 \div 5^3 =$  \_\_\_\_\_

3.  $8^5 \div 8 =$  \_\_\_\_\_

$(2 \times 2 \times 2 \times 2) \div (2 \times 2) =$  \_\_\_\_\_

4.  $(5 \times 5) \times (5 \times 5) =$  \_\_\_\_\_

$9^9 \div 9^5 =$  \_\_\_\_\_

5.  $10^3 \times 10 =$  \_\_\_\_\_

$6^5 \div 6^2 =$  \_\_\_\_\_

6.  $4^3 \div 4^2 =$  \_\_\_\_\_

$(7 \times 7 \times 7) \div 7 =$  \_\_\_\_\_

7.  $11^5 \times 11^2 =$  \_\_\_\_\_

$6 \times 6^5 =$  \_\_\_\_\_

8.  $(8 \times 8 \times 8 \times 8) \div (8 \times 8) =$  \_\_\_\_\_

$5^3 \times 5^2 =$  \_\_\_\_\_

9.  $12^9 \times 12^2 =$  \_\_\_\_\_

$11^{10} \div 11^4 =$  \_\_\_\_\_

10.  $3^4 \times 3^4 =$  \_\_\_\_\_

$(4 \times 4 \times 4 \times 4) \div 4 =$  \_\_\_\_\_

11.  $(5 \times 5 \times 5) \div 5 =$  \_\_\_\_\_

$6^8 \times 6^4 =$  \_\_\_\_\_

12.  $4^{12} \div 4^6 =$  \_\_\_\_\_

$3^3 \times 3^9 =$  \_\_\_\_\_

13.  $(6 \times 6 \times 6 \times 6) \div (6 \times 6 \times 6) =$  \_\_\_\_\_

$15^8 \div 15^3 =$  \_\_\_\_\_

14.  $9^9 \times 9^6 =$  \_\_\_\_\_

$7^8 \times 7^2 =$  \_\_\_\_\_

15.  $2^7 \div 2 =$  \_\_\_\_\_

$4^{11} \times 4 =$  \_\_\_\_\_

## Lesson 1.3 Negative Exponents

When a power includes a negative exponent, express the number as 1 divided by the base and change the exponent to positive.

$$\begin{aligned} 4^{-2} &= \frac{1}{4^2} \\ &= \frac{1}{16} \\ &= 0.0625 \end{aligned}$$

To multiply or divide powers with the same base, combine bases, add or subtract the exponents, and then simplify.

$$\begin{aligned} 2^{-3} \times 2^{-2} &= 2^{-5} = \frac{1}{2^5} = 0.03125 \\ 2^{-4} \div 2^{-2} &= 2^{-2} = \frac{1}{2^2} = 0.25 \end{aligned}$$

Rewrite each expression with a positive exponent. Then, solve. Round your answer to four decimal places.

- | <b>a</b>            | <b>b</b>          | <b>c</b>         |
|---------------------|-------------------|------------------|
| 1. $3^{-2} =$ _____ | $6^{-3} =$ _____  | $8^{-2} =$ _____ |
| 2. $7^{-3} =$ _____ | $3^{-3} =$ _____  | $9^{-2} =$ _____ |
| 3. $4^{-3} =$ _____ | $5^{-2} =$ _____  | $2^{-3} =$ _____ |
| 4. $2^{-4} =$ _____ | $10^{-3} =$ _____ | $1^{-4} =$ _____ |

Find each product. Round your answer to five decimal places.

- |                                   |                                |                                |
|-----------------------------------|--------------------------------|--------------------------------|
| 5. $4^{-2} \times 4^{-3} =$ _____ | $2^{-4} \times 2^{-1} =$ _____ | $3^{-2} \times 3^{-3} =$ _____ |
| 6. $6^{-2} \times 6^{-2} =$ _____ | $5^{-2} \times 5^{-4} =$ _____ | $3^{-2} \times 3^{-2} =$ _____ |
| 7. $8^{-6} \times 8^4 =$ _____    | $7^{-5} \times 7^2 =$ _____    | $2^{-7} \times 2^4 =$ _____    |

Find each quotient. Round your answer to five decimal places.

- |                                 |                              |                              |
|---------------------------------|------------------------------|------------------------------|
| 8. $4^{-4} \div 4^{-2} =$ _____ | $8^{-5} \div 8^{-3} =$ _____ | $3^{-5} \div 3^{-2} =$ _____ |
| 9. $2^{-8} \div 2^{-4} =$ _____ | $5^{-6} \div 5^{-4} =$ _____ | $6^{-7} \div 6^{-4} =$ _____ |
| 10. $3^{-3} \div 3^2 =$ _____   | $4^{-3} \div 4^1 =$ _____    | $2^{-6} \div 2^{-3} =$ _____ |

## Lesson 1.3 Negative Exponents

Rewrite each multiplication or division expression using a base and an exponent.

**a**

1.  $3^{-4} \times 3^{-6} =$  \_\_\_\_\_

2.  $4^3 \div 4^{-2} =$  \_\_\_\_\_

3.  $12^{-3} \times 12^{-4} =$  \_\_\_\_\_

4.  $7^6 \div 7^{-3} =$  \_\_\_\_\_

5.  $11^4 \times 11^{-3} =$  \_\_\_\_\_

6.  $8^{-5} \div 8^3 =$  \_\_\_\_\_

7.  $7^5 \times 7^{-4} =$  \_\_\_\_\_

8.  $2^5 \div 2^{-3} =$  \_\_\_\_\_

9.  $6^3 \div 6^{-4} =$  \_\_\_\_\_

10.  $9^{-3} \times 9^4 =$  \_\_\_\_\_

11.  $8^{-4} \div 8^{-2} =$  \_\_\_\_\_

12.  $3^{-6} \times 3^{-3} =$  \_\_\_\_\_

13.  $10^{-2} \div 10^3 =$  \_\_\_\_\_

14.  $9^{-6} \div 9^{-3} =$  \_\_\_\_\_

15.  $6^{-5} \div 6^3 =$  \_\_\_\_\_

16.  $12^{-6} \div 12 =$  \_\_\_\_\_

**b**

$9^{-3} \div 9^{-5} =$  \_\_\_\_\_

$5^5 \times 5^{-6} =$  \_\_\_\_\_

$4^{-6} \times 4^4 =$  \_\_\_\_\_

$2^{-3} \div 2^3 =$  \_\_\_\_\_

$6^{-5} \times 6^{-4} =$  \_\_\_\_\_

$12^{-4} \div 12 =$  \_\_\_\_\_

$5^{-3} \times 5^2 =$  \_\_\_\_\_

$3^{-12} \times 3^{-4} =$  \_\_\_\_\_

$7^{-3} \div 7^4 =$  \_\_\_\_\_

$10^{-5} \times 10^{-2} =$  \_\_\_\_\_

$2^{-2} \times 2^{-12} =$  \_\_\_\_\_

$8^{-6} \div 8^4 =$  \_\_\_\_\_

$4^{-5} \times 4^{-2} =$  \_\_\_\_\_

$11^4 \div 11^{-2} =$  \_\_\_\_\_

$5^{-12} \times 5^{-4} =$  \_\_\_\_\_

$4^{-4} \times 4^{-3} =$  \_\_\_\_\_

## Lesson 1.4 Scientific Notation

**Scientific notation** is most often used as a concise way of writing very large and very small numbers. It is written as a number between 1 and 10 multiplied by a power of 10. Any number can be expressed in scientific notation.

$$1,503 = 1.503 \times 10^3$$

+3

$$0.0376 = 3.76 \times 10^{-2}$$

-2

$$85 = 8.5 \times 10^1$$

+1

Translate numbers written in scientific notation into standard form by reading the exponent.

$$7.03 \times 10^5 = 703000$$

Move the decimal right 5 places.

$$5.4 \times 10^{-4} = 0.00054$$

Move the decimal left 4 places.

Write each number in scientific notation.

- | a                   | b                 | c                 |
|---------------------|-------------------|-------------------|
| 1. $0.013 =$ _____  | $4105 =$ _____    | $27.3 =$ _____    |
| 2. $810.4 =$ _____  | $0.684 =$ _____   | $0.017 =$ _____   |
| 3. $0.0006 =$ _____ | $427.5 =$ _____   | $36,054 =$ _____  |
| 4. $50,210 =$ _____ | $0.0005 =$ _____  | $256.21 =$ _____  |
| 5. $36.25 =$ _____  | $0.892 =$ _____   | $0.00065 =$ _____ |
| 6. $0.027 =$ _____  | $1,416.3 =$ _____ | $0.0049 =$ _____  |

Write each number in standard form.

- |                                  |                               |                               |
|----------------------------------|-------------------------------|-------------------------------|
| 7. $2.6 \times 10^{-3} =$ _____  | $8.46 \times 10^5 =$ _____    | $4.65 \times 10^{-1} =$ _____ |
| 8. $9.02 \times 10^4 =$ _____    | $5.15 \times 10^{-2} =$ _____ | $8.45 \times 10^3 =$ _____    |
| 9. $7.25 \times 10^{-4} =$ _____ | $1.06 \times 10^3 =$ _____    | $9.06 \times 10^{-5} =$ _____ |
| 10. $9.7 \times 10^{-3} =$ _____ | $3.02 \times 10^4 =$ _____    | $1.56 \times 10^4 =$ _____    |

**Lesson 1.4** Scientific Notation

Write each number in scientific notation.

**a**

1.  $32.5 =$  \_\_\_\_\_

2.  $0.569 =$  \_\_\_\_\_

3.  $0.079 =$  \_\_\_\_\_

4.  $98.25 =$  \_\_\_\_\_

5.  $7,831 =$  \_\_\_\_\_

6.  $0.0004 =$  \_\_\_\_\_

7.  $5,624 =$  \_\_\_\_\_

8.  $0.0045 =$  \_\_\_\_\_

**b**

$6,708 =$  \_\_\_\_\_

$67,345 =$  \_\_\_\_\_

$0.51 =$  \_\_\_\_\_

$2,385 =$  \_\_\_\_\_

$418 =$  \_\_\_\_\_

$7,301.4 =$  \_\_\_\_\_

$23.65 =$  \_\_\_\_\_

$523 =$  \_\_\_\_\_

**c**

$387 =$  \_\_\_\_\_

$0.027 =$  \_\_\_\_\_

$6,791 =$  \_\_\_\_\_

$0.413 =$  \_\_\_\_\_

$75.183 =$  \_\_\_\_\_

$0.0018 =$  \_\_\_\_\_

$0.965 =$  \_\_\_\_\_

$0.355 =$  \_\_\_\_\_

Write each number in standard form.

9.  $9.13 \times 10^5 =$  \_\_\_\_\_

$4.02 \times 10^{-3} =$  \_\_\_\_\_

$2.43 \times 10^4 =$  \_\_\_\_\_

10.  $1.124 \times 10^{-1} =$  \_\_\_\_\_

$8.48 \times 10^3 =$  \_\_\_\_\_

$5.12 \times 10^{-2} =$  \_\_\_\_\_

11.  $9.47 \times 10^3 =$  \_\_\_\_\_

$3.28 \times 10^{-4} =$  \_\_\_\_\_

$6.73 \times 10^{-3} =$  \_\_\_\_\_

12.  $5.3 \times 10^{-5} =$  \_\_\_\_\_

$4.13 \times 10^4 =$  \_\_\_\_\_

$3.78 \times 10^4 =$  \_\_\_\_\_

13.  $3.12 \times 10^3 =$  \_\_\_\_\_

$1.329 \times 10^5 =$  \_\_\_\_\_

$8.69 \times 10^2 =$  \_\_\_\_\_

14.  $4.5 \times 10^{-4} =$  \_\_\_\_\_

$9.8 \times 10^{-6} =$  \_\_\_\_\_

$3.56 \times 10^5 =$  \_\_\_\_\_

15.  $5.42 \times 10^{-2} =$  \_\_\_\_\_

$9.08 \times 10^{-8} =$  \_\_\_\_\_

$2.7 \times 10^3 =$  \_\_\_\_\_

16.  $7.3 \times 10^2 =$  \_\_\_\_\_

$1.25 \times 10^4 =$  \_\_\_\_\_

$8.8 \times 10^{-8} =$  \_\_\_\_\_

**Check What You Learned****Integers and Exponents**

Find the value of each expression.

**a****b****c**

1.  $3^7 =$  \_\_\_\_\_

$4^8 =$  \_\_\_\_\_

$5^2 =$  \_\_\_\_\_

2.  $12^9 =$  \_\_\_\_\_

$4^5 =$  \_\_\_\_\_

$8^4 =$  \_\_\_\_\_

3.  $3^{-6} =$  \_\_\_\_\_

$4^{-3} =$  \_\_\_\_\_

$5^{-7} =$  \_\_\_\_\_

4.  $10^{-4} =$  \_\_\_\_\_

$6^{-3} =$  \_\_\_\_\_

$8^{-5} =$  \_\_\_\_\_

5.  $8^{-6} =$  \_\_\_\_\_

$7^4 =$  \_\_\_\_\_

$3^{-9} =$  \_\_\_\_\_

6.  $10^7 =$  \_\_\_\_\_

$9^{-2} =$  \_\_\_\_\_

$2^8 =$  \_\_\_\_\_

Rewrite each multiplication or division expression using a base and an exponent.

7.  $8^2 \times 8^3 =$  \_\_\_\_\_

$5^{-5} \times 5^{-2} =$  \_\_\_\_\_

$6^2 \times 6^4 =$  \_\_\_\_\_

8.  $4^{-1} \times 4^3 =$  \_\_\_\_\_

$3^4 \div 3^{-3} =$  \_\_\_\_\_

$12^{-2} \div 12^4 =$  \_\_\_\_\_

9.  $5^4 \times 5^7 =$  \_\_\_\_\_

$8^{-2} \times 8^{-6} =$  \_\_\_\_\_

$5^8 \times 5^{-3} =$  \_\_\_\_\_

10.  $9^{-2} \times 9^{-5} =$  \_\_\_\_\_

$7^8 \div 7^{-3} =$  \_\_\_\_\_

$6^{-2} \div 6^{-4} =$  \_\_\_\_\_

11.  $7^{-1} \times 7^{-3} =$  \_\_\_\_\_

$9^4 \div 9^8 =$  \_\_\_\_\_

$3^{-8} \div 3^4 =$  \_\_\_\_\_

12.  $10^{-3} \times 10^3 =$  \_\_\_\_\_

$8^6 \div 8^{-3} =$  \_\_\_\_\_

$7^4 \times 7^2 =$  \_\_\_\_\_