

STUDY LINK
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Exponents



An **exponent** is a raised number that shows how many times the number to its left is used as a factor.

Examples: 5^2 ← exponent 5^2 means $5 * 5$, which is 25.
 10^3 ← exponent 10^3 means $10 * 10 * 10$, which is 1,000.
 2^4 ← exponent 2^4 means $2 * 2 * 2 * 2$, which is 16.

1. Write each of the following as a factor string. Then find the product.

Example: $2^3 = 2 * 2 * 2 = 8$ **a.** $10^4 =$ _____ = _____

b. $7^2 =$ _____ = _____ **c.** $20^3 =$ _____ = _____

2. Write each factor string using an exponent.

Example: $6 * 6 * 6 * 6 = 6^4$ **a.** $11 * 11 =$ _____

b. $9 * 9 * 9 =$ _____ **c.** $50 * 50 * 50 * 50 =$ _____

3. Write each of the following as a factor string that does *not* have any exponents. Then use your calculator to find the product.

Example: $2^3 * 3 = 2 * 2 * 2 * 3 = 24$

a. $2 * 3^3 * 5^2 =$ _____ = _____

b. $2^4 * 4^2 =$ _____ = _____

4. Write the prime factorization of each number. Then write it using exponents.

Example: $18 = 2 * 3 * 3 = 2 * 3^2$

a. $40 =$ _____ = _____

b. $90 =$ _____ = _____

Practice


5. $6,383 - 1,342 =$ _____ **6.** $48 * 15 =$ _____

7. $7 \overline{)354} \rightarrow$ _____ **8.** $50,314 + 48,826 =$ _____

9. $84 \div 7 =$ _____ **10.** $701 * 68 =$ _____