
Definitions

1. ***Exponential
2. ***Exponent
3. ***Write the five rules for working with exponentials.
4. ***In the number 6^3 , the 3 is called the _____ and the 6 is called the _____ .

Evaluate in standard form.

5.** 5^2

6.** 3^4

7.** -2^2

Simplify in exponential notation.

8.** $5^3 \times 5^4$

9.** $6^5 \div 6^3$

10. 7^0

11.** $(5^4)^2$

12.** $5^3 \div 5^7$

Simplify in exponential notation.

13.** $5^4 \times 6^3 \times 5^2 \times 6^4$

14.** $\frac{5^5 \times 6^3 \times 5^2 \times 6^7}{5^4 \times 6^6}$

15.** $\frac{2^3 \times 4^3 \times 2 \times 4^5}{2^2 \times 4^8}$

16.** Which fraction is larger?

a. $(1/2)^3$ b. $(1/2)^4$

17.* Show that $(2/3)^{-5} = (3/2)^5$
Hint: use the rule for negative exponents and simplify.

- 18.* Use an example to show that $a^m \div a^n = a^{m-n}$
- 19.* Simplify in exponential notation. $25^2 \times 125$
- 20.* Why is any number to the zero power, except zero, equal to one?
- 21.*** Provide a parent/guardian contact information; phone, email, etc (CHP)