

Algebra I

8-1

Exponents

Orders of Operations-

1) _____

2) _____

3) _____

4) _____

Contrast

$$x^4 =$$

$$4x =$$

Write each in exponential form.

1) $x \cdot x \cdot x \cdot x$ 2) $a \cdot a \cdot a \cdot a \cdot a$ 3) $n \cdot y \cdot y \cdot n$ 4) $c \cdot c \cdot y$ 5) $2 \cdot p \cdot 5 \cdot p$

6) $a \cdot 3 \cdot a \cdot a \cdot 2 \cdot a$ 7) $(-r)(-r)$ 8) $-r \cdot r$ 9) $(-2) \cdot b \cdot (-4) \cdot b$

10) $2 \cdot k \cdot k \cdot (-4) \cdot k$ 11) $a \cdot a \cdot a \cdot 3 \cdot b \cdot b \cdot b$ 12) $a \cdot a \cdot b \cdot 5 \cdot b \cdot b \cdot a$

Simplify

13) 2^5

14) $5 \cdot 2^3$

15) -2^2

Laws of Exponents

1) $x^4 \cdot x^5 =$

2) $(x^4)^3 =$

3) $(x^3 + x^2)^4 =$

4) $(2x^3y^2)^3 =$

5) $x^3 + x^4 =$

Simplify. Leave answer in *exponential form*.

1) $3^3 \cdot 3^5$

2) $[(-11)^3]^7$

3) $(9 \cdot 7)^4$

4) $(x + 3)^3$

Simplify.

5) $c^5 \cdot c^2$

6) $(c^2)^5$

7) $(c^5d^2)^4$

Order of Magnitude -

- 8) Currently, there are _____ people who live in Duluth, MN. There are almost 100 times as many people who live in the state of Minnesota. What is the order of magnitude of the number of people in the whole state?

Assignment: pg. 492 4 - 38 even, 40 - 49 all, 52-58 all.
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