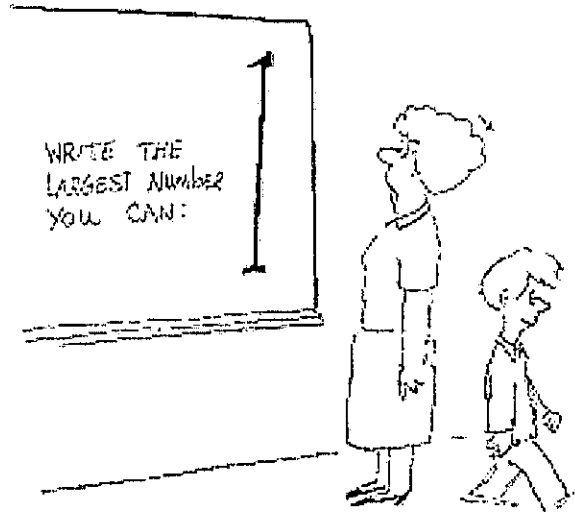


Name: _____

Hour: _____

Chapter 7A

Powers & Exponents



Lesson 7-1: Integer Exponents

Zero Exponent	Positive Exponent	Negative Exponent

Practice

1. 5^3

2. $(-8)^5$

3. 6^{-4}

4. 3^0

5. -6^{-4}

6. 103^0

Evaluate each expression for the give values of the variables.

7. x^{-1} for $x = 2$

8. $a^0 b^{-3}$ for $a = 8$ and $b = -2$

Simplify the expression.

9. $3y^{-2}$

10. $\frac{-4}{k^{-4}}$

11. $\frac{x^{-3}}{a^0 y^5}$

Lesson 7-3: Multiplication Properties of Exponents

Simplifying Exponential Expressions

An exponential expression is completely simplified if...

- There are no _____
- The same _____ does not appear more than once in a product or quotient
- No powers are raised to _____
- No _____ are raised to _____
- No _____ are raised to _____
- Coefficients do not have any common factor other than _____

Property Name	Words	Numbers	Algebra
Product of Powers Property			
Power of a Power Property			
Power of a Product Property			

Practice

1. $2^5 \cdot 2^6$

2. $4^2 \cdot 3^{-2} \cdot 4^5 \cdot 3^6$

3. $a^4 \cdot b^5 \cdot a^2$

4. $y^2 \cdot y \cdot y^{-4}$

5. $(7^4)^3$

6. $(x^2)^{-4}$

7. $(-3x)^2$

8. $(x^{-2} \cdot y^0)^3$

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Lesson 7-4: Division Properties of Exponents

Property Name	Words	Numbers	Algebra
Quotient of Powers Property			
Positive Power of a Quotient Property			
Negative Power of a Quotient Property			

Practice

1. $\frac{3^8}{3^2}$

2. $\frac{x^5}{x^5}$

3. $\frac{a^5b^9}{(ab)^4}$

4. $\frac{2^3 \cdot 3^2 \cdot 5^7}{2 \cdot 3^4 \cdot 5^5}$

5. $\left(\frac{3}{4}\right)^3$

6. $\left(\frac{2x^3}{yz}\right)^3$

7. $\left(\frac{2}{5}\right)^{-3}$

8. $\left(\frac{3x}{y^2}\right)^{-3}$

9. $\left(\frac{3}{4}\right)^{-1}\left(\frac{2x}{3y}\right)^{-2}$