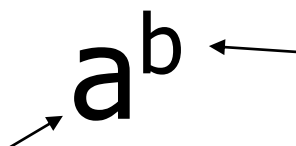


6.1 Simplifying Integer Exponents I



Simplify.

a) $(.02)^3$

b) $(1/5)^3$

c) $(-4)^3$

d) -4^3

e) -5^2

f) $(-5)^2$

Write the expressions without exponents:

a) a^5

b) $2x^3$

c) $(2x)^3$

d) y^1

e) 7^1

f) $x^2 \cdot x^4$

Product Rule

Simplify.

a) $z \cdot z^3$

b) $p^2 \cdot t \cdot p^5$

c) $3^5 \cdot 3^4$

d) $6y^2 \cdot 3y^3 \cdot 2y^{-4}$

e) $(-2c^4)(3d^{-3})(4c^2)$

f) $5xy \cdot 2x^3y^4 \cdot 3x^8y^{-2}$

The Exponent 0

a) 4^0

b) $(-3)^0$

c) $-(4.8)^0$

d) x^0

Quotient Rule

a) $\frac{a^5}{a^3}$

b) $\frac{15x^{15}}{3x^3}$

c) $\frac{6b^2b^3c^6}{2b^4c}$

Rule for Negative Exponents

a) 5^{-1}

b) $(-5)^{-3}$

c) $\frac{a^{-2}}{b^{-3}}$

Simplify.

a) $x^{-9} \cdot x^7$

b) $\frac{x^6}{x^{-1}}$

c) $\frac{10^{-5}}{10^{-2}}$

d) $\frac{x^6 y^3}{x^2 y^5}$

e) $\frac{14x^{-3}y^2}{2x^{-3}y^{-2}}$

f) $(9x^4)^0$

g) $3y^{-3}$

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