

Workday - Review Properties of Exponents (7.1 - 7.4)

Simplify. Your answer should contain only positive exponents.

1) $(-3)^4$

2) $-2x^{-4}y^{-3}$

3) $4u^3v^{-2}$

4) $2xy^{-3} \cdot 3x^{-2}y^{-1}$

5) $2x^4y^3 \cdot 3x^2y^3$

6) $(2x^4y^{-3})^4$

7) $(-a^0b^4)^0$

8) $(2x^{-4}y^3)^3 \cdot -2y^2$

9) $(-2a^2b^2 \cdot (ab)^3)^2$

10) $\frac{-4nm^{-2}}{-m^3n^{-2}}$

11) $-\frac{3xy^{-3}}{x^3y^4}$

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

13) $\left(\frac{uv^2}{(-2u^{-4})^{-2}}\right)^3$

Write each expression in radical form.

14) $5^{\frac{1}{3}}$

15) $7^{\frac{5}{3}}$

Write each expression in exponential form.

16) $(\sqrt[4]{2})^7$

17) $(\sqrt[4]{3})^7$

Write each rational exponent as a radical. Then simplify.

18) $27^{\frac{2}{3}}$

19) $81^{\frac{1}{2}}$

20) Write each number in scientific notation.

a) 90000

b) 0.00000000546

21) Write each number in standard notation.

a) 1.253×10^{-3}

b) 76.291×10^8

22) Write each number in simplified scientific notation.

a) 458.231×10^{-6}

b) 91.387×10^7