

Dividing Monomials: The
Quotient Rule and Integer
Exponents

1. Use the Quotient Rule to
simplify. All variables are nonzero.

$$\frac{16x^5}{12x}$$

2. Use the Quotient Rule to
simplify. All variables are nonzero.

$$\frac{12x^2}{9x^6}$$

3. Use the Quotient Rule to
simplify. All variables are nonzero.

$$\frac{-50x^3y^{10}}{10x^8y^2}$$

4. Use the Quotient to a Power
Rule to simplify. All variables are
nonzero.

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

5. Use the Quotient to a Power
Rule to simplify. All variables are
nonzero.

$$\left(\frac{3m^3n}{q^5}\right)^4$$

6. Use the Zero Exponent Rule to simplify. All variables are nonzero.

$$-2^0$$

7. Use the Zero Exponent Rule to simplify. All variables are nonzero.

$$(-2)^0$$

8. Use the Negative Exponent Rules to simplify. Write answers with positive exponents. All variables are nonzero.

$$-3x^{-4}$$

9. Use the Negative Exponent Rules to simplify. Write answers with positive exponents. All variables are nonzero.

$$3^{-2} - 2^{-3}$$

10. Use the Negative Exponent Rules to simplify. Write answers with positive exponents. All variables are nonzero.

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

11. Use the Negative Exponent Rules to simplify. Write answers with positive exponents. All variables are nonzero.

$$\frac{5}{x^{-4}}$$

12. Use the Negative Exponent Rules to simplify. Write answers with positive exponents. All variables are nonzero.

$$\frac{3}{(5x^2)^{-3}}$$

13. Use the Laws of Exponents to simplify. Write answers with positive exponents. All variables are nonzero.

$$\left(\frac{2}{15}x^2y^{-4}\right)\left(\frac{-5}{8}x^{-4}y^7\right)$$

14. Use the Laws of Exponents to simplify. Write answers with positive exponents. All variables are nonzero.

$$\frac{20x^2y^{-3}}{30x^{-4}y^{-12}}$$

15. Use the Laws of Exponents to simplify. Write answers with positive exponents. All variables are nonzero.

$$(2x^4y^{-2})\left(\frac{3xy^{-3}}{y^{-5}}\right)^2$$