Dividing Monomials: The Quotient Rule and Integer Exponents

1. Use the Quotient Rule to simplify. All variables are nonzero. (similar to p.351 #34)

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

2. Use the Quotient Rule to simplify. All variables are nonzero. (similar to p.351 #34)

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

3. Use the Quotient Rule to simplify. All variables are nonzero. (similar to p.351 #36)

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

4. Use the Quotient to a Power Rule to simplify. All variables are nonzero. (similar to p.351 #44)

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

5. Use the Quotient to a Power Rule to simplify. All variables are nonzero. (similar to p.351 #46)

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

6. Use the Zero Exponent Rule to simplify. All variables are nonzero. (similar to p.351 #48)

$$-2^0$$

7. Use the Zero Exponent Rule to simplify. All variables are nonzero. (similar to p.351 #54)

$$(-2)^0$$

8. Use the Negative Exponent Rules to simplify. Write answers with positive exponents. All variables are nonzero. (similar to p.351 #66)

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

9. Use the Negative Exponent Rules to simplify. Write answers with positive exponents. All variables are nonzero. (similar to p.351 #68)

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

10. Use the Negative Exponent Rules to simplify. Write answers with positive exponents. All variables are nonzero. (similar to p.351 #74)

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

11. Use the Negative Exponent Rules to simplify. Write answers with positive exponents. All variables are nonzero. (similar to p.351 #78)

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

12. Use the Negative Exponent Rules to simplify. Write answers with positive exponents. All variables are nonzero.
(similar to p.351 #82)

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

13. Use the Laws of Exponents to simplify. Write answers with positive exponents. All variables are nonzero.
(similar to p.351 #84)

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

14. Use the Laws of Exponents to simplify. Write answers with positive exponents. All variables are nonzero.
(similar to p.351 #88)

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

15. Use the Laws of Exponents to simplify. Write answers with positive exponents. All variables are nonzero.
(similar to p.351 #92)

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