

Quotient of Powers Property

$$\frac{a^m}{a^n} = a^{m-n}$$

When dividing the same bases, subtract the exponents. If there are coefficients, divide them.

Examples

$$1. \quad \frac{5^6}{5^4} = 5^{6-4} = 5^2 = 25$$

$$2. \quad \frac{x^9}{x^7} = x^{9-7} = x^2$$

$$3. \quad \frac{24m^5n^3}{-6mn^2} = \frac{24}{-6} \cdot m^{5-1}n^{3-2} = -4m^4n$$

Try These

$$1. \quad \frac{8^7}{8^4}$$

1. _____

$$2. \quad \frac{3^{15}}{3^{14}}$$

2. _____

$$3. \quad \frac{d^{12}}{d^7}$$

3. _____

$$4. \quad \frac{k^8}{k^2}$$

4. _____

$$5. \quad \frac{x^6y^4}{x^2y^3}$$

5. _____

$$6. \quad \frac{18m^6n^8}{6mn}$$

6. _____

$$7. \quad \frac{36a^3b^7c^4}{-9a^2b^5}$$

7. _____

$$8. \quad \frac{-15p^6q^9}{-5p^3q^7}$$

8. _____