

8.2: Quotient Power Property

“I WILL ...

Apply rules of Exponents from the Zero and Negative Property.”

I. Quotient Power Property, $\frac{a^m}{a^n} = a^{m-n}$

- A. When dividing an expression with a power, _____ the powers. The exponent goes with the higher number
- B. Leave the bases _____
- C. _____ NEGATIVE EXPONENTS
- D. Put the exponents on the bigger side of the base

II. Model Problems

Ex 1: Solve $\frac{8^{10}}{8^4}$	Ex 2: Solve $\left(\frac{2}{3}\right)^0$	Your Turn: Solve $\frac{(-4)^9}{(-4)^2}$
Ex 3: Solve $\frac{x^8}{x^3}$	Ex 4: Solve $\frac{1}{x^4} \cdot x^6$	Your Turn: Solve $\frac{3}{x^5} \cdot x^8$

Ex 5: Simplify $\frac{x^8 y^6}{x^7 y}$	Ex 6: Simplify $\left(-\frac{7}{x}\right)^2$	Your Turn: Solve $\frac{5x^7 y^3}{10x^7 y^2}$
Ex 7: Solve $\left(\frac{4x^2}{5y}\right)^3$		Ex 8: Solve $\left(\frac{x^2}{y}\right)^5$
Ex 9: Solve $\left(\frac{2x}{3y}\right)^3 \cdot \left(\frac{y^5}{16}\right)$	Your Turn: Solve $\left(\frac{x^3}{y}\right)^7 \cdot \frac{1}{3x^8}$	