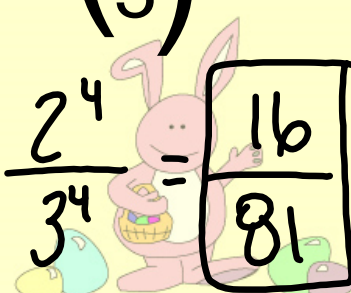


Power of a Quotient

$$\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$$

Examples: Simplify each quotient.

7. $\left(\frac{2}{3}\right)^4$



$$\frac{2^4}{3^4} = \frac{16}{81}$$

8. $\left(\frac{-3}{y}\right)^3$

$$\frac{(-3)^3}{y^3} = \frac{-27}{y^3}$$


9. $\left(\frac{9}{-2}\right)^6$

$$\frac{9^6}{(-2)^6} = \frac{9^6}{64}$$

You try some...

Examples: Simplify each quotient.

10. $\left(\frac{2}{x}\right)^5$

$$\frac{2^5}{x^5} = \frac{32}{x^5}$$


11. $\left(\frac{5}{4}\right)^3$

$$\frac{5^3}{4^3} = \frac{125}{64}$$

12. $\left(\frac{-w}{7}\right)^2$

$$\frac{(-w)^2}{7^2} = \frac{w^2}{49}$$

$(-w)(-w)$

8.3 Division Properties of Exponents.notebook