

Dividing Exponents Using Quotient of Powers Rule

Rewrite each expression using positive exponents only, then simplify.

A. Same Base (Quotient Rule)

1. $\frac{x^7}{x^3} =$ _____

3. $\frac{m^9}{m^4} =$ _____

2. $\frac{a^6}{a^2} =$ _____

4. $\frac{y^5}{y^1} =$ _____

B. Zero and Negative Exponents

5. $\frac{p^4}{p^4} =$ _____

7. $\frac{z^2}{z^6} =$ _____

6. $\frac{t^3}{t^5} =$ _____

8. $\frac{a^4}{a^7} =$ _____

C. Mixed Variables (Core Practice)

9. $\frac{x^5y^3}{x^2y} =$ _____

12. $\frac{r^3s^8}{rs^5} =$ _____

10. $\frac{a^7b^4}{a^3b^2} =$ _____

13. $\frac{12x^4y^2}{3x^2y} =$ _____

11. $\frac{m^6n^2}{m^4n^5} =$ _____

14. $\frac{10a^5b^3}{5a^2b^6} =$ _____

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2. $\frac{a^6}{a^2} = \underline{a^4}$

4. $\frac{y^5}{y^1} = \underline{y^4}$

B. Zero and Negative Exponents

5. $\frac{p^4}{p^4} = \underline{1}$

7. $\frac{z^2}{z^6} = \underline{\frac{1}{z^4}}$

6. $\frac{t^3}{t^5} = \underline{\frac{1}{t^2}}$

8. $\frac{a^4}{a^7} = \underline{\frac{1}{a^3}}$

C. Mixed Variables (Core Practice)

9. $\frac{x^5y^3}{x^2y} = \underline{x^3y^2}$

12. $\frac{r^3s^8}{rs^5} = \underline{r^2s^3}$

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13. $\frac{12x^4y^2}{3x^2y} = \underline{4x^2y}$

11. $\frac{m^6n^2}{m^4n^5} = \underline{\frac{m^2}{n^3}}$

14. $\frac{10a^5b^3}{5a^2b^6} = \underline{\frac{2a^3}{b^3}}$