

# Laws of Indices: Dividing Terms

*Simplify the following expressions fully.*

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1. Simplify:  $\frac{x^5}{x^2}$

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2. Simplify:  $10y^8 \div 2y^3$

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3. Simplify:  $\frac{a^4b^3}{a^2b}$

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4. Simplify:  $\frac{12p^7q^5}{4p^3q^4}$

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5. Simplify:  $\frac{x^3}{x^5}$  (answer with a positive index)

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6. Simplify:  $\frac{5a^2}{15a^6}$  (answer with a positive index)

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7. Simplify:  $(4x^3)^2 \div 2x^2$

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8. Simplify:  $\frac{(3y^4)^3}{9y^5}$

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9. Simplify:  $\frac{8a^4 \times 3a^5}{6a^2}$

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10. Simplify:  $\frac{5x^3y^2 \times 4xy^4}{10x^2y^3}$

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11. The area of a rectangle is  $24a^5b^3$  and its width is  $6ab^2$ . Find an expression for its length.

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12. Simplify:  $\frac{3(x^2y)^4}{9x^5y^3}$

