

Exponent Rules

| Addition and Subtraction | Multiplication | Exponents | Division |
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| <p>Like terms only Add or subtract coefficients. Bases stay the same. Exponents stay the same.</p> <p>Ex. 1: $3a^2b - 2ab^2 + 4ab^2 - a^2b$</p> | <p>Multiply coefficients. Bases stay the same. Add exponents.</p> <p>Ex. 2: $(3mn^2)(3m^3n^4)$</p> | <p>Raise coefficients to the outside power. Bases stay the same. Multiply exponents.</p> <p>Ex. 3: $(2f^2g^3)^4$</p> | <p>Reduce the fraction formed by coefficients. Bases stay the same. Subtract exponents – the result goes where the bigger exponent was.</p> <p>Ex. 4: $\frac{8x^2y^5}{10x^4y}$</p> |
| 1. $2a - 2b + a - b$ | 2. $(2p^2q)(p^2q^5)$ | 3. $(8r^5s)^2$ | 4. $\frac{8r^5s}{4r^2s^2}$ |
| 5. $8x^2 + 4x - 2x^2 + x + 7$ | 6. $(4s^2t^2)(-2s^5t^2)$ | 7. $(-4a^2b^2)^2$ | 8. $\frac{7j^8k^{11}}{11j^{12}k^2}$ |
| 9. $7c^2d^4 - 2c^2d^2 - c^2d^4$ | 10. $(2uv)(3uv)(4u^3v)$ | 11. $(3a^3b^3)^3$ | 12. $\frac{14y^4z^5}{4yz^5}$ |