

Fractions \rightarrow Adding \rightarrow need common denominator
 \rightarrow multiplying \rightarrow straight across top straight across bottom

Laws

Any # to exponent 0 is 1 $\rightarrow a^0 = 1$

Mult same bases \rightarrow add exponent $a^1 \cdot a^{-7} = a^{1+(-7)} = a^{-6}$

Negative exponent? base goes 'opposite' side and exp. becomes positive $a^{-6} = \frac{1}{a^6}$ $\frac{1}{2^{-2}} = 2^2$ *

Fraction exponent? numerator is exponent and denom is root or index
 $b^{d/n} = (\sqrt[n]{b})^d$

Power of power? multiply exponents $(7^2)^4 = 7^{2 \cdot 4} = 7^8$

Dividing (same base)? subtract exponents $\frac{3^{-4}}{3^{-1}} = 3^{-4-(-1)} = 3^{-3} \rightarrow \frac{1}{3^3}$ *