

EXPONENT LAWS

Law of Negative Exponents

If a power has a negative exponent, move the entire power “to a different floor” and make the exponent positive. Do not leave the numerator blank, put a 1.

$$x^{-3} = \frac{1}{x^3}$$

→ Only powers that have a negative exponent should “change floors”:

$$\frac{2x^4y^{-2}}{3z^{-1}} = \frac{2x^4z}{3y^2}$$

→ If the base of the power is a fraction, flip the fraction and make the exponent positive.

$$\left(\frac{x}{y}\right)^{-2} = \left(\frac{y}{x}\right)^2$$

→ **Common Mistake:** A negative exponent DOES NOT change the sign of the base.

$$3^{-2} \neq -3^2 = -9$$

Wrong Answer

$$3^{-2} = \frac{1}{3^2} = \frac{1}{9}$$

Right Answer

