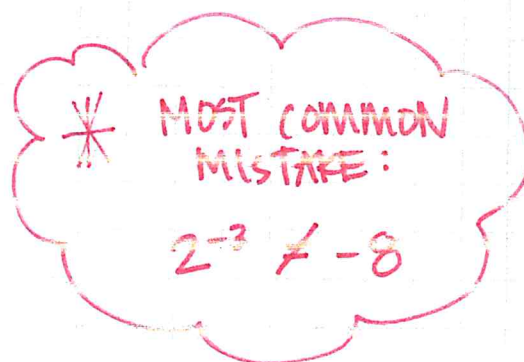


NEGATIVE EXPONENTS

Remember our table from yesterday?

2^4	$2 \cdot 2 \cdot 2 \cdot 2 = 16$	$\div 2$ $\div 2$ $\div 2$ $\div 2$
2^3	$2 \cdot 2 \cdot 2 = 8$	
2^2	$2 \cdot 2 = 4$	
2^1	$2 = 2$	
2^0	1	
2^{-1}		
2^{-2}		
2^{-3}		

LET'S EXPLORE NEGATIVE EXPONENTS BY CONTINUING THE PATTERN!



We can also look at it as an UPSTAIRS situation.

A negative exponent tells you to flip-flop the "position" of the exponent:

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

* goes from UPSTAIRS to DOWNSTAIRS... looking for the negative sign on its way

$$\frac{1}{x^4} = x^{-4}$$

heads UPSTAIRS and adds back the negative

$$\frac{x^{-2}}{y^{-5}} \Rightarrow \frac{y^5}{x^2}$$

send UPSTAIRS (for y^{-5}) and DOWNSTAIRS (for x^{-2})

$$\frac{x^2}{x^{-3}} = x^2 \cdot x^3 = x^5$$

send UPSTAIRS (for x^{-3})