

1.4 LAWS OF EXPONENTS p.26

ZERO EXPONENT LAW:

... -3, -2, -1, 0, 1, 2, ...

A POWER WITH AN INTEGER BASE
(NOT EQUAL TO ZERO) & AN EXPONENT
ZERO IS EQUAL TO ONE.

$$n^0 = 1$$

$$n \neq 0$$

ex) $2^4 = 16 \xrightarrow{\div 2}$

$2^3 = 8 \xrightarrow{\div 2}$

$2^2 = 4 \xrightarrow{\div 2}$

$2^1 = 2 \xrightarrow{\div 2}$

$2^0 = 1$

$3^4 = 81 \xrightarrow{\div 3}$

$3^3 = 27 \xrightarrow{\div 3}$

$3^2 = 9 \xrightarrow{\div 3}$

$3^1 = 3 \xrightarrow{\div 3}$

$3^0 = 1$

ex) $16x^0 = 1$

ex) $(-16x^2)^0 = 1$

$$\text{ex)} = 16z^0 = -1$$

$$\text{ex)} = -(-16z^0) = 1$$

$$\text{ex)} \left(\begin{matrix} x^2 & y & -4 \end{matrix} \right)^0 = 1$$
$$\left(\begin{matrix} x^2 \\ y^4 \end{matrix} \right)^0 = \frac{(x^2)^0}{(y^4)^0} = \frac{1}{1} = 1$$

ex)

$-x^2$

y_0

=

$-x^2$

0

=

$-x^2$

