

25  
10  
2012

$$2^4 = 1 \cdot 2 \cdot 2 \cdot 2 = 16$$

$$2^4 = \frac{1}{1 \cdot 2 \cdot 2 \cdot 2} = \frac{1}{16}$$

$$3^{-2} = \frac{1}{3^2} = \frac{1}{27}$$

$$(-2)^{-3} = \frac{1}{(-2)^3} = \frac{1}{(-2)(-2)(-2)} = -\frac{1}{8}$$

$$\left(\frac{3}{8}\right)^{-2} = \frac{1}{\left(\frac{3}{8}\right)^2} = \frac{1}{\left(\frac{25}{64}\right)} = \frac{64}{25} = \left(\frac{8}{5}\right)^2$$

## EXPONENTES NEGATIVOS

## LOGARITMOS

$$\log_2(8) = 3 \iff 2^3 = 8$$

$$\log_3(81) = 4 \iff 3^4 = 81$$

$$\log_5(25) = 2 \iff 5^2 = 25$$

$$\log_b(a) = c \iff b^c = a$$

$$\log_4(64) = x$$

$$4^x = 64 = 4^3$$

$$\log_4(22) = x$$

$$!$$

$$\log_6(36) = 2$$

$$\log_2(27) = 2$$

$$\log_4(4) = 1$$

$$\log_5(1) = 0$$

$$\log_3\left(\frac{1}{9}\right) = -2$$

$$\begin{array}{r} 64 \\ 8 \overline{) 64} \\ 48 \phantom{00} \\ 16 \phantom{00} \\ 16 \phantom{00} \\ 0 \end{array}$$

$$\begin{array}{r} 32 \\ 8 \overline{) 32} \\ 24 \phantom{00} \\ 8 \phantom{00} \\ 8 \phantom{00} \\ 0 \end{array}$$

$$\begin{array}{r} 36 \\ 6 \overline{) 36} \\ 36 \phantom{00} \\ 0 \phantom{00} \\ 0 \phantom{00} \\ 0 \end{array}$$

$$\begin{array}{r} 27 \\ 3 \overline{) 27} \\ 21 \phantom{00} \\ 6 \phantom{00} \\ 6 \phantom{00} \\ 0 \end{array}$$

$$\begin{array}{r} 44 \\ 4 \overline{) 44} \\ 40 \phantom{00} \\ 4 \phantom{00} \\ 4 \phantom{00} \\ 0 \end{array}$$

$$\begin{array}{r} 5130 \\ 5 \overline{) 5130} \\ 25 \phantom{00} \\ 26 \phantom{00} \\ 13 \phantom{00} \\ 13 \phantom{00} \\ 0 \end{array}$$

$$\frac{1}{2} = \frac{1}{3 \cdot 3} = \frac{1}{9}$$

## LOG NATURAL

$$\frac{d}{dx} [\ln x] = \frac{1}{x}$$

$$\ln x = \log_e x$$

2012/01/07