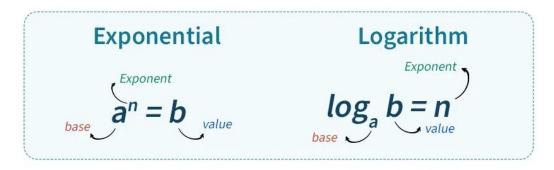
## Logarithm - Definition, Rules , Furmulas and Examples



## Properties of Log

Property Name	Property
Log of 1	log <sub>a</sub> 1 = 0
Log of the same number as base	log <sub>a</sub> a = 1
Product Rule	log <sub>a</sub> (mn) = log <sub>a</sub> m + log <sub>a</sub> n
Quotient Rule	$\log_a(\underline{m}) = \log_a m - \log_a n$
Power Rule	log <sub>a</sub> m <sup>n</sup> = n log <sub>a</sub> m
Change of Base Rule	$\log_b a = \frac{\log_c a}{\log_c b}$ $(OR)$ $\log_b a \cdot \log_c b = \log_c a$
Equality Rule	$\log_b a = \log_b c \Rightarrow a = c$
Number Raised to Log	a <sup>log</sup> a <sup>x</sup> = x