LOGARITHMS AS INDICES:

The **logarithmic function** is a mathematical function of the following form:

$$f(x) = \log_a x$$

where **a** is a constant, called the base of the function. Logarithms (logs) are indices which can be manipulated as seen below:

If $y = a^x$, then $x = \log_a y$

Where

- a = base, and $a > 0$, $a \neq 1$

- x = index, and $x > 0$

Normally, we use $\log_e x$, with the base 'e'.

2.3 WORKED EXAMPLE

Find x:

$$3^{2x+1} = \frac{1}{27}$$

2.4 WORKED EXAMPLE

Find x:

$$(3^x - 9)(5^x - 1) = 0$$