Conditions

Write the equations in logarithmic form.
(a) 512 =8^3
(b) 49= (1/7) -2
(c) a=b^c

Solution

As we know, logarithmic functions are the inverse of exponential functions. For example, the inverse of

$y = a^x \; is \; y = \log_a x \; , which \; is \; the \; same \; as \; x = a^y$

That's why:

a)

$512 = 8^3$

$3 = \log_8 512$

b)

$49 = \left(\frac{1}{7}\right)^{-2}$

$-2 = \log_{\frac{1}{7}} 49$

c)

$a = b^c$

$c = \log_b a$