Terminology To Know

These are important terms and notations for this section.

Definition 1 (Exponential Form of a Logarithm)**.** *The exponential form of a logarithm is the exponential equality the corresponds to a logarithmic equality.*
For Example: *The logarithmic equality* $\log_4(256) = x$ *has, as an exponential form,* $4^x = 256$*.*
In general: *For a logarithmic equality* $\log_b(c) = a$*, the exponential form is* $b^a = c$*.*

Definition 2 (Base (of a logarithm)**.** *The base of a logarithm is the value of the base of the exponential that the logarithm is the inverse of.*
For Example: *Log with a base of* 4 *is written* $\log_4$ *and is the function that represents the inverse of the exponential with the base 4, eg* 4^x*. Thus* $\log_4(4^x) = x$*.*

Definition 3 (Argument (of a log))**.** *The argument of a log is the contents inside the log, which is the value of the exponential that you are trying to invert.*
For Example: *The expression* $\log_4(256)$ *has an argument of* 256*.*

Learning outcomes: