Mathematics For Computing Laws of Logarithms

www.Stats-Lab.com

Laws for Logarithms

The following laws are very useful for working with logarithms.

1.
$$\log_b(X) + \log_b(Y) = \log_b(XY)$$

2.
$$\log_b(X)$$
 - $\log_b(Y) = \log_b(X/Y)$

3.
$$\log_b(X^Y) = Y \log_b(X)$$

4.
$$\log_b(X) = 1$$
 when $b = X$

Use the Laws of Logarithms (only) to evaluate the following expressions:

- 1. $\log_2(8)$
- 2. $\log_2(\sqrt{128})$
- 3. $\log_2(64)$
- 4. $\log_5(125) + \log_3(729)$
- 5. $\log_2(64/4)$

1. Evaluate $log_2(8)$

2. Evaluate $\log_2(\sqrt{128})$

3. $\log_2(64)$

4.
$$\log_5(125) + \log_3(729)$$

5. $\log_2(64/4)$