## **Logarithmic properties**

1. 
$$log_a m^n = n * log_a m$$

$$2. log_a a = 1$$

$$3. \log_n m = \frac{1}{\log_m n}$$

4. 
$$log_a(mn) = log_a m + log_a n$$

5. 
$$\log_a\left(\frac{m}{n}\right) = \log_a m - \log_a n$$

6. 
$$log_b m = \frac{log_a m}{log_a b}$$