

1) If $\log_a b = c$ then $b = a^c$

2) $\log_a b = \log_c b / \log_c a$

Change of Base

3) $\log_a a^b = b$

4) $a^{\log_a b} = b$

5) $\log_a b + \log_a c = \log_a (b \times c)$

Sum Rule

6) $\log_a b - \log_a c = \log_a (b \div c)$

Difference Rule

7) $\log_a b^c = c \times \log_a b$

Power Rule

8) $-\log_a (b \div c) = \log_a (c \div b)$

9) $\log_a b = 1 \div \log_b a$