Формулы и свойства логарифмов

1. $a^{\log_a b} = b$

2. $\log_a 1 = 0$

3. $\log_a a = 1$

4. $\log_a x \cdot y = \log_a x + \log_a y$

5. $\log_a \frac{x}{y} = \log_a x - \log_a y$

6. $\log_a \frac{1}{x} = -\log_a x$

7. $\log_a x^n = n \log_a x$

8. $\log_a \sqrt[n]{x} = \frac{1}{n} \log_a x$

9. $\log_{a^b} x = \frac{1}{b} \log_a x$

10. $\log_a x = \log_{a^b} x^b$

11. $\log_a x = \frac{\log_b x}{\log_b a}$

12. $\log_a x = \frac{1}{\log_x a}$

13. $(\log_a x)' = \frac{1}{x \ln a}$