Logarithm Laws

1. $\log_a(b) = c$ whenever $a^c = b$.

2. $\log_a(b) + \log_a(c) = \log_a(b \times c)$

3. $\log_a(b) - \log_a(c) = \log_a\left(\frac{b}{c}\right)$

4. $c\log_a(b) = \log_a\left(b^c\right)$

5. $\log_a(a) = 1$

6. $\log_a(1) = 0$

7. $a^{\log_a(b)} = b$

8. $\log_a\left(a^b\right) = b$

9. $\ln(e^x) = x$

Support: Study Development offers workshops, short courses, 1 to 1 and small group tutorials.

- Join a tutorial or workshop on the [Study Development tutorial and workshop webpage](#) or search 'YSJ study development tutorials.'

- Access our Study Success resources on the [Study Success webpage](#) or search 'YSJ study success.'