

## Logarithms

- Natural logarithm:  $\log_e x$  or  $\log x$
- Common logarithm:  $\log_{10} x$
- $\log \frac{m}{n} = \log m - \log n$
- $\log mn = \log m + \log n$
- $\log_a b = \frac{\log a}{\log b}$
- $\log_{10} e = 0.43429$
- $\log \pi = 0.49715$
- $\log_e 10 = 2.30259$
- $\log_a 1 = 0$
- $\log_a 0 = -\infty, a > 1$

allsubjects4you.com