

## **Logarithms and Antilogarithms**

When calculating the logarithm of a number, retain in the mantissa (the number to the right of the decimal point in the logarithm) the same number of significant figures as there are in the number whose logarithm is being found. For example,

$$\log(3.000 \times 10^4) = 4.477121, \text{ which should be rounded to } 4.4771$$

$$\log(3 \times 10^4) = 4.477121, \text{ but this value should be rounded to } 4.5$$

When calculating the antilogarithm of a number, the resulting value should have the same number of significant figures as the mantissa in the logarithm. For example,

$$\text{antilog}(0.301) = 1.9998, \text{ which should be rounded to } 2.00,$$

$$\text{antilog}(0.30) = 1.9998, \text{ which should be rounded to } 2.0$$

Ref: <http://www.ndt-ed.org/GeneralResources/SigFigs/SigFigs.htm>