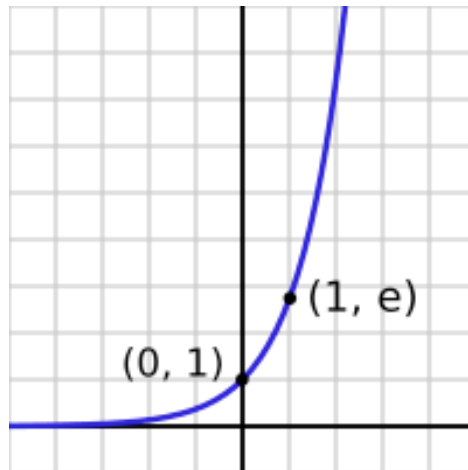


EXPONENTIAL FUNCTION

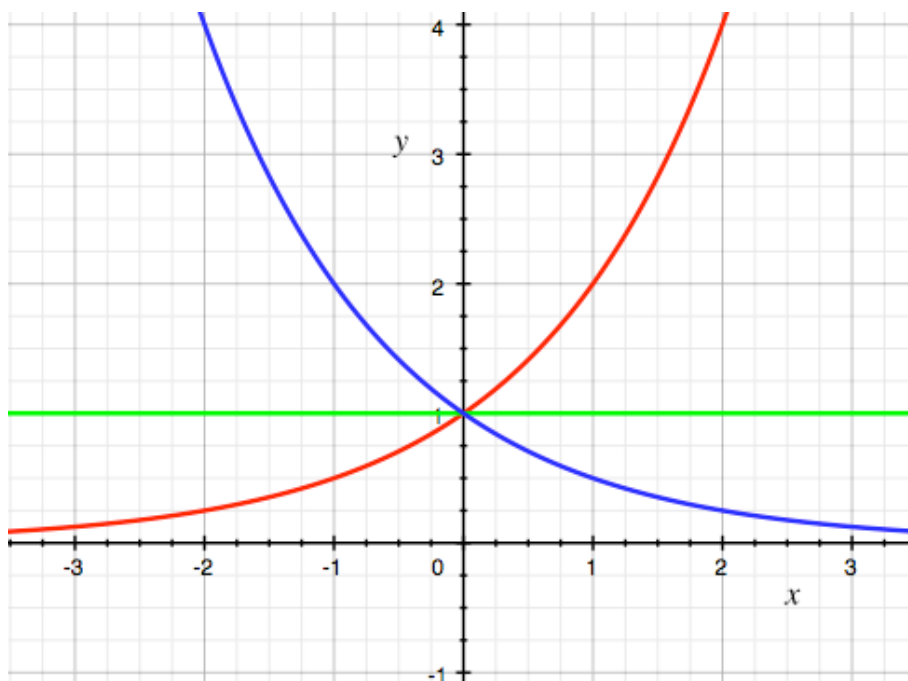
The term **exponential function** is used for functions of the form:

$$y = b^x$$

where b , called the *base*, is any positive real number **not** equal to 1.0 (one). The base b **below** is Euler's number (e) ≈ 2.718281828



The **red** curve below is b^x , the **green** curve is 1^x , and the **blue** curve is b^{-x} , which is also known as a **decaying exponential**.

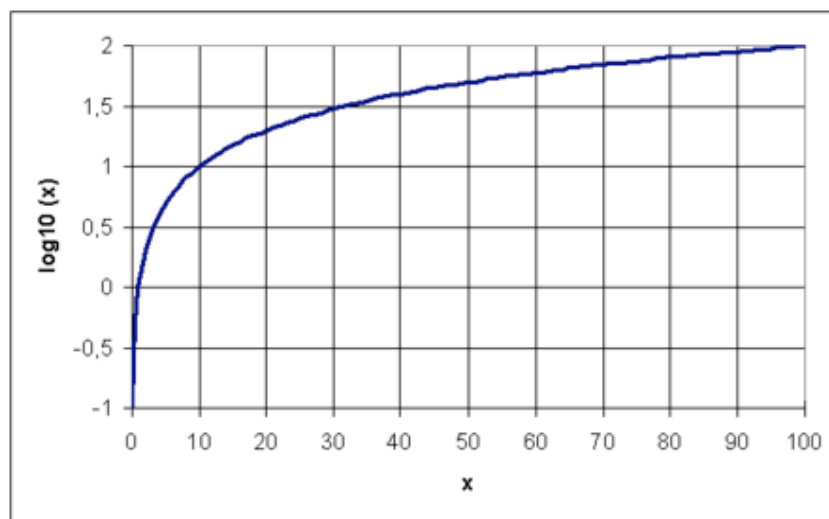


LOGARITHMIC FUNCTION

The term **logarithmic function** is generally used for functions of the form:

$$y = \log_b (x)$$

where b , called the *base*, is any positive real number **other than** 1.0 (one). The base b **below** 10 (ten) is for common logarithms:



A doubling of power (2:1) is 3 decibels, as **both** graphs illustrate:

