Exponential Models

There are 2 types of exponential graphs:

$f(x)=a^x$ for $a>1$ $f(x)=a^x$ for $0<a<1$
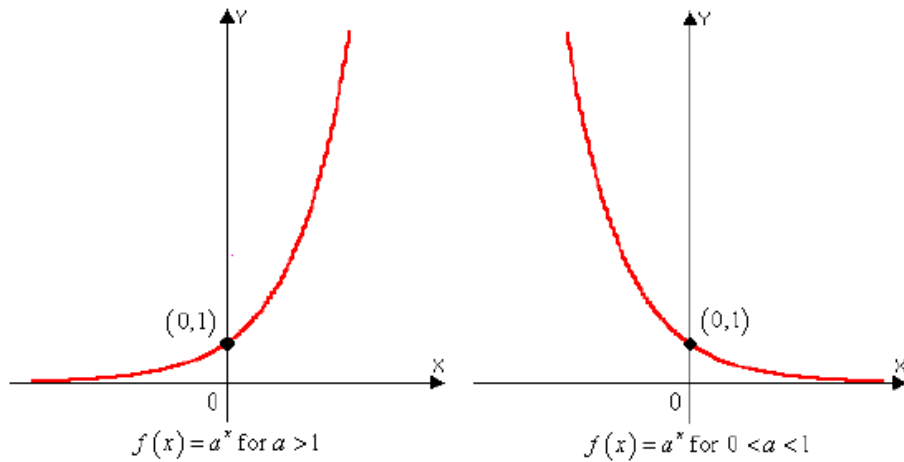
- In the table of values of an exponential function, there is a _____ between pairs of successive y-values.

Example:

x	0	1	2	3	4	5	6	7
y	2	4	8	16	32	64	128	256

- The length of time it takes a substance to double in size/value is called the _____

- The length of time it takes a substance to decrease/decay to half its original size/value is called the

  _____

Example   Find the doubling time for the population modeled in the following graph.