

Writing Exponential Functions
Day 2 Notes

Name _____

Exponential equations are written in the form: _____ where

_____ is the initial value,

_____ is the growth/decay factor,

_____ is the growth/decay rate.

For Exponential Growth $b > \underline{\hspace{1cm}}$; For Exponential Decay $\underline{\hspace{1cm}} < b < \underline{\hspace{1cm}}$

Review day 1

$$y = 3.7(2)^x$$

Exponential Growth or Decay?

Factor? $b = \underline{\hspace{1cm}}$

Initial value? $a = \underline{\hspace{1cm}}$

Create a table of values

x	y

Example 1

x	y
0	81
1	27
2	9
3	3
4	1

Is the function Exponential: Yes or No?

Exponential Growth or Decay?

Factor? $b = \underline{\hspace{1cm}}$

Initial value? $a = \underline{\hspace{1cm}}$

Exponential equation _____

Example 2

x	y
1	13.2
2	29.04
3	63.888
4	140.555
5	309.22

Is the function Exponential: Yes or No?

Exponential Growth or Decay?

Factor? $b =$ _____

Initial value? $a =$ _____

Exponential equation _____

Example 3

x	y
2	125.83
3	78.64
4	49.15
5	30.72
6	19.2

Is the function Exponential: Yes or No?

Exponential Growth or Decay?

Factor? $b =$ _____

Initial value? $a =$ _____

Exponential equation _____

Example 4

YEAR	POPULATION
1972	200
1973	322
1974	519
1975	836
1976	1346
1977	2167
1978	3490

Given the following data from a large mouth bass population in a local pond below, find the exponential equation that models this situation. Let 0 represent the year 1970.