

key Characteristics of Exponential Functions

$$1) f(x) = 4\left(\frac{1}{2}\right)^x$$

Initial value: 4

Growth Factor: $\frac{1}{2}$

Growth or Decay: Decay

$$2) f(x) = 10(2)^x$$

Initial value: 10

Growth Factor: 2

Growth or Decay:

$$3) f(x) = 6(0.25)^x$$

Initial value: 6

Growth Factor: 0.25

Growth or Decay:

$$4) f(x) = 0.75^x$$

Initial value: 1

Growth Factor: 0.75

Growth or Decay:

5)

	0	3
	1	6
2	x	f(x)
2	2	12
2	4	48
2	6	192
	8	384
	10	768
	12	3072

$(a^2)^{1/2} = (4)^{1/2}$

$a=2$

a) Increasing / Decreasing?

b) Growth / Decay Factor: 2

c) Initial value: 3

d) Formula of Function: $f(x) = 3(2)^x$

e) Evaluate $f(9) = 3(2)^9 = 1536$

6)

	x	f(x)
	-4	0.1024
	-3	0.256
	-2	0.64
	-1	1.6
1	0	4
1	1	10
	2	25

a) Increasing / Decreasing?

b) Growth / Decay Factor: 2.5

c) Initial value: 4

d) Formula of Function: $f(x) = 4(2.5)^x$

e) Evaluate $f(9) = 4(2.5)^9 = 15258.79$

Round 2
Dec. places