

7.1 Graphing Exponential Functions Honors Algebra 2

KeyConcept Parent Function of Exponential Growth Functions

Parent Functions: $f(x) = b^x, b > 1$

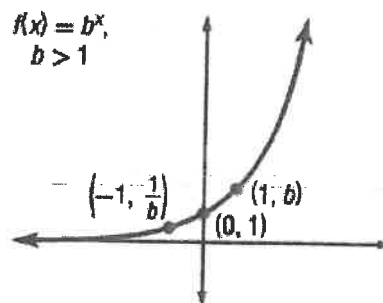
Type of graph: continuous, one-to-one, and increasing

Domain: all real numbers

Range: all positive real numbers

Asymptote: x-axis

Intercept: (0, 1)



KeyConcept Transformations of Exponential Functions

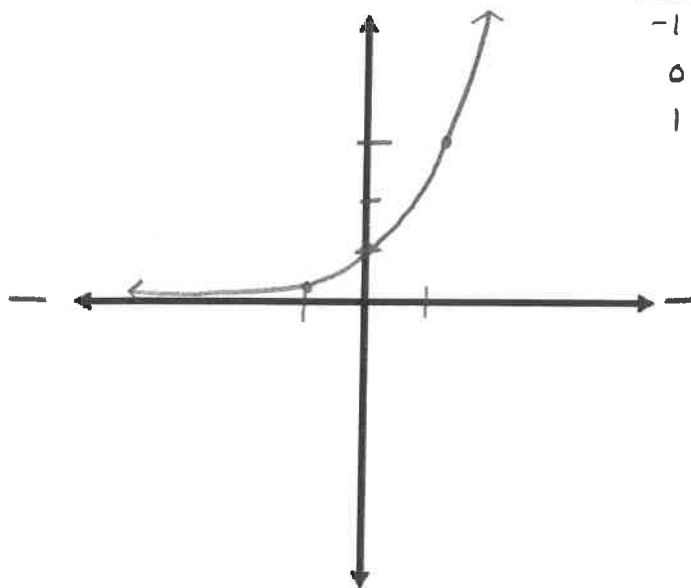
$$f(x) = ab^{x-h} + k$$

1. Graph the following and state the domain and range:

* if $x = 0$ will
y always = 1?

a. $y = 3^x$ base is 3

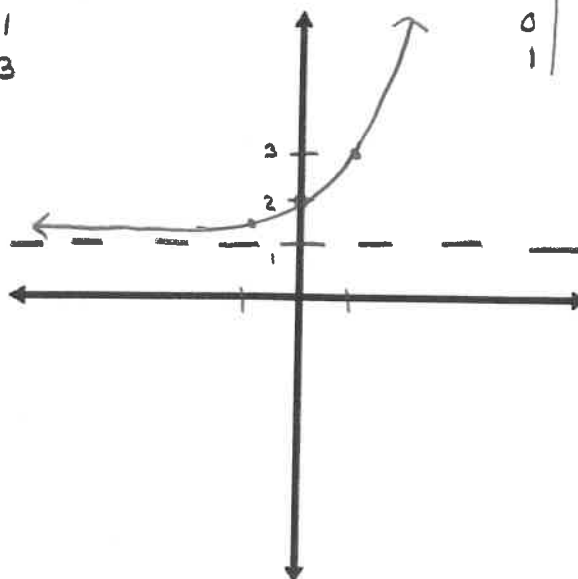
x	y
-1	1/3
0	1
1	3



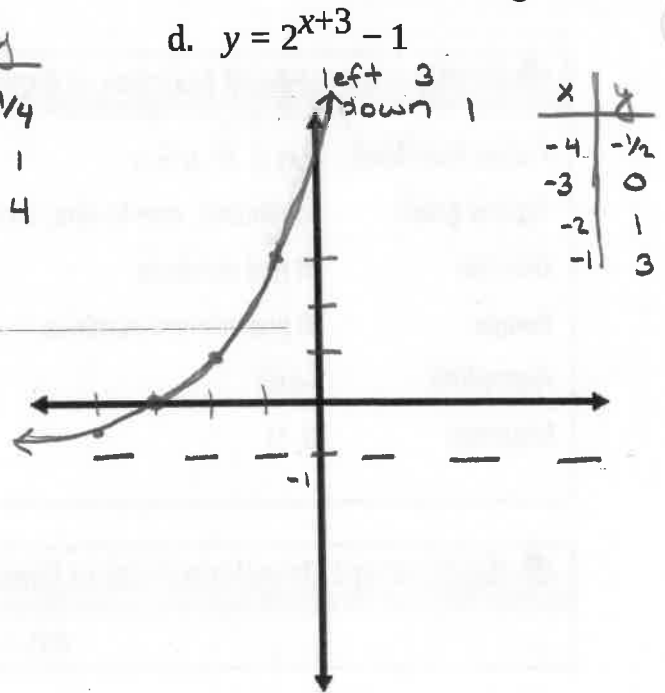
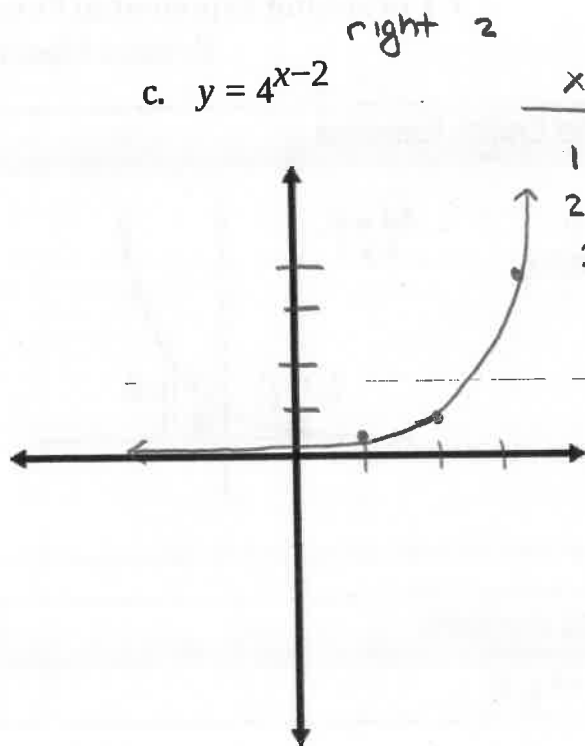
b. $y = 2^x + 1$

up 1
* HA up 1 too

x	y
-1	3/2
0	2
1	3



7.1 Graphing Exponential Functions Honors Algebra 2



KeyConcept Parent Function of Exponential Decay Functions

Parent Functions: $f(x) = b^x, 0 < b < 1$

Type of graph: continuous, one-to-one, and decreasing

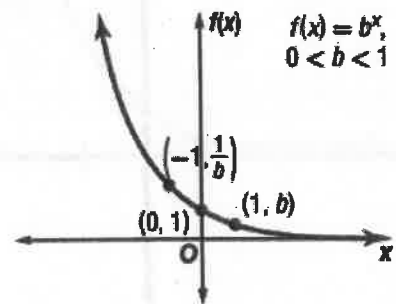
Domain: all real numbers

Range: positive real numbers

Asymptote: x-axis

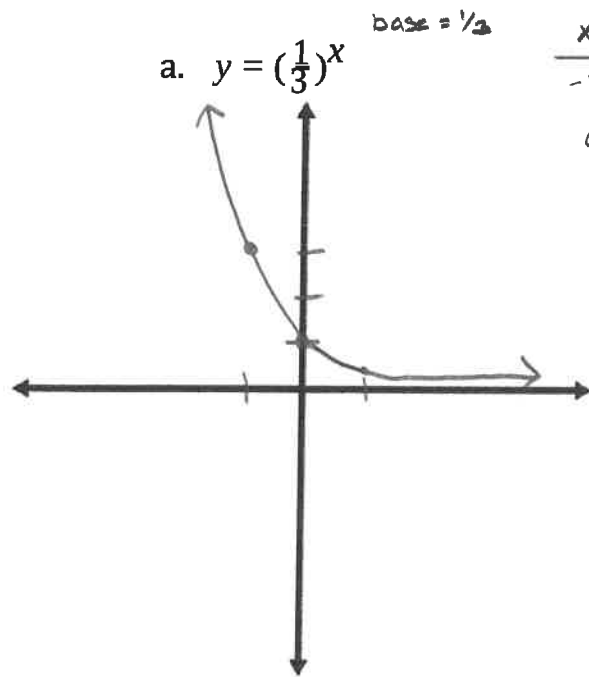
Intercept: (0, 1)

Model

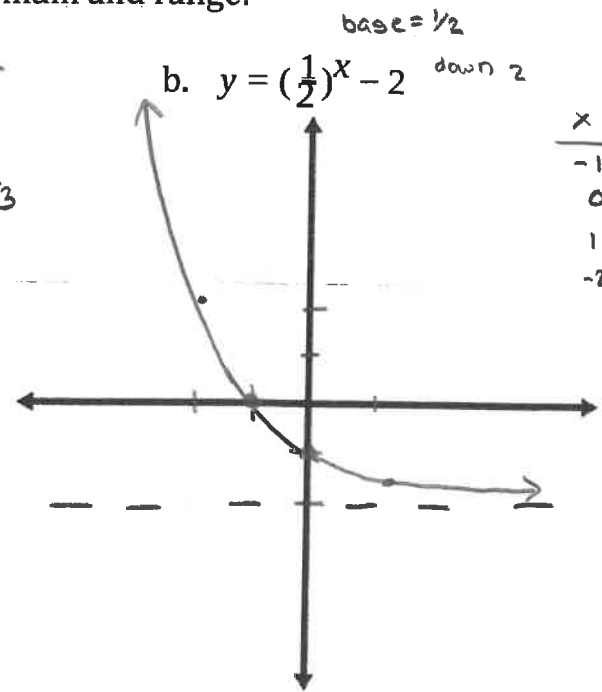


7.1 Graphing Exponential Functions
Honors Algebra 2

2. Graph the following and state the domain and range:



x	y
-1	3
0	1
1	1/3



x	y
-1	0
0	-1
1	-3/2
2	-2

