Algebra 2B 8.1-8.2 Review

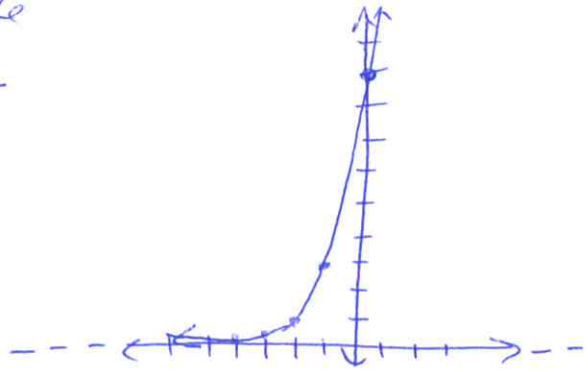
Name Key HR__

Graph the exponential function using tables. Find domain and range. Describe transformations.

1. $y = 3^{x+2}$

Final Table

x-2	y
-4	1/9
-3	1/3
-2	1
-1	3
0	9

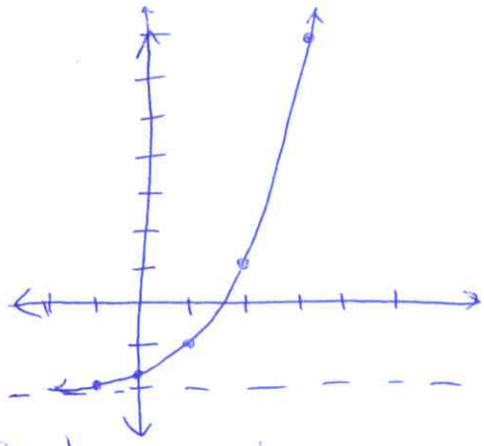


Translation 2L D(-∞,∞) R(0,∞)

2. $y = 3^{x-1} - 2$

Final Table

x+1	y-2
-1	-17/9
0	-5/3
1	-1
2	1
3	7



Translation 1R, 2D D(-∞,∞) R(-2,∞)

3. An initial population of 895 quail increases at an annual rate of 7%. Write an exponential function to model the quail population.

x = # of yrs
y = # of quail

b = 1 + .07 = 1.07

$y = 895(1.07)^x$

4. For an annual rate of change of -31%, find the corresponding growth or decay factor.

b = 1 − .31 = .69

5. Without graphing, determine whether the function $y = (5.2)^x$ represents exponential growth or exponential decay.

Growth b > 1

6. Without graphing determine whether the function $y = 7\left(\frac{2}{3}\right)^x$ represents exponential growth or decay. Explain how you know.

Decay b < 1

7. In a particular region of a national park, there are currently 330 deer, and the population is increasing at an annual rate of 11%.

a. Write an exponential function to model the deer population.

x = # of yrs
y = # of deer

b = 1 + .11 = 1.11

$y = 330(1.11)^x$

b. Predict the number of deer that will be in the region after 10 years

$y = 330(1.11)^{10} \approx 937$ deer