

7-1 Exploring Exponential Models

Objective:
Identify Exponential Growth and Decay
Apply to real life situations



Interest Rates

House Prices



Car Value

March Madness



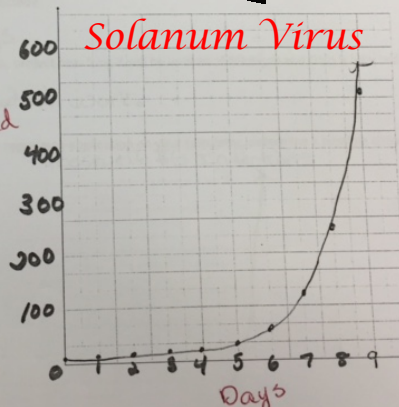
As time went on, did totals increase or decrease?

TRACKING THE DISEASE

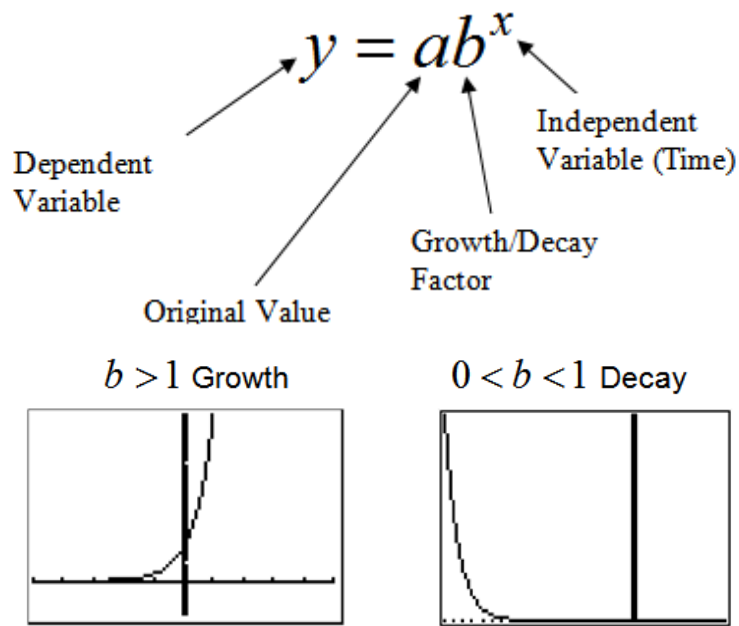
Fill in the table depending on the number of students infected each day by Solanum in Mrs. Guerrero's class. Graph your data.

Days	# of People Infected
Day 0	1
Day 1	2
Day 2	4
Day 3	8
Day 4	16
Day 5	32
Day 6	64
Day 7	128
Day 8	256
Day 9	512

Infected



Functions are exponential when they grow/decrease very quickly (news worthy).



After determining if the function represents growth/decay, state the percent of growth/decay.

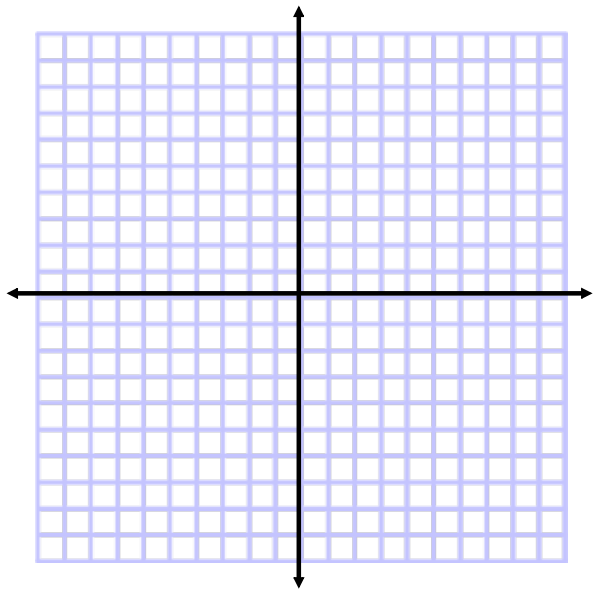
1. $y = 29(1.7)^x$

2. $y = 4(.45)^x$

Graph the following. Use calc if needed.

$$y = \frac{1}{3}(3)^x$$

X	Y
-2	
-1	
0	
1	
2	
3	

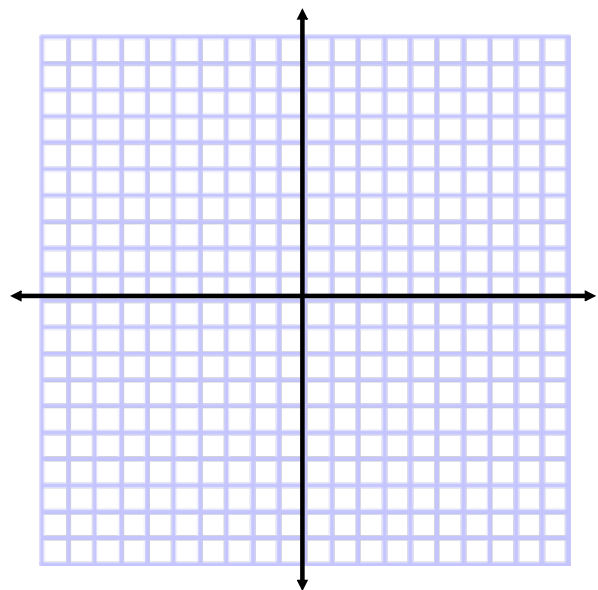


Growth or Decay?

Graph the following. Use calc if needed.

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

X	Y
-3	
-2	
-1	
0	
1	
2	



Growth or Decay?



You bought a sculpture in 1985 for \$380. It increases in value by 8% each year. What is the value in 1990? 2000?

Is it Decay or Growth? _____

Equation for Exponential: _____



A new car in 1990 cost \$20,000. The value decreases 16% every year. What is the value in 1996? 1998?

Is it Decay or Growth? _____

Equation for Exponential: _____





A house originally cost \$20,000 in 1950. The value increased 5% a year till 1995. What was it worth at that time?

Is it Decay or Growth? _____

Equation for Exponential: _____

