

Name _____

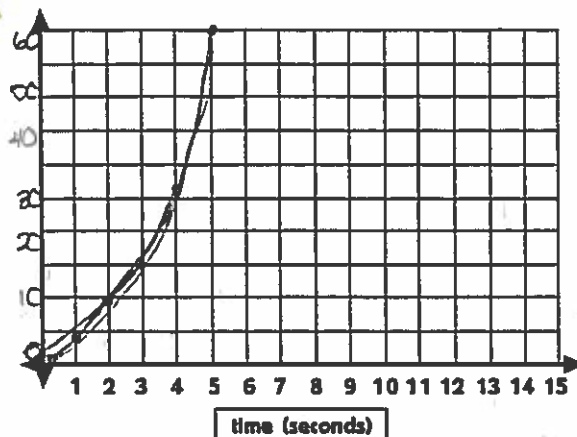
12 Date August 24, 2017 Section 1.A.3

Example 1 - Bacteria Growth

The video shows bacteria doubling every second. Create a table for the number of bacteria versus time.

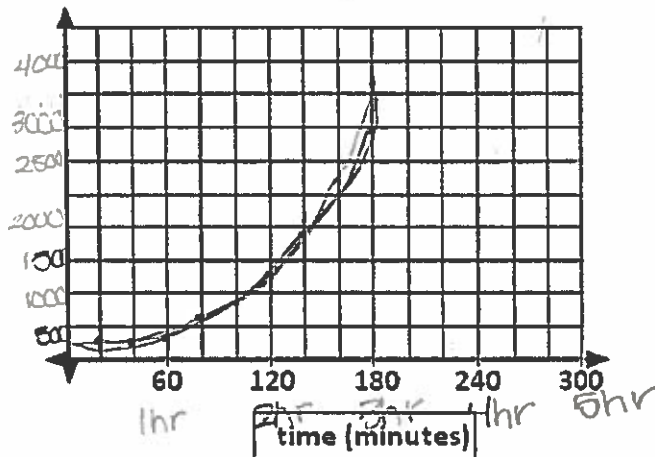
High-Speed

Time (sec)	# of Bacteria
0	2
1	4
2	8
3	16
4	32
5	64



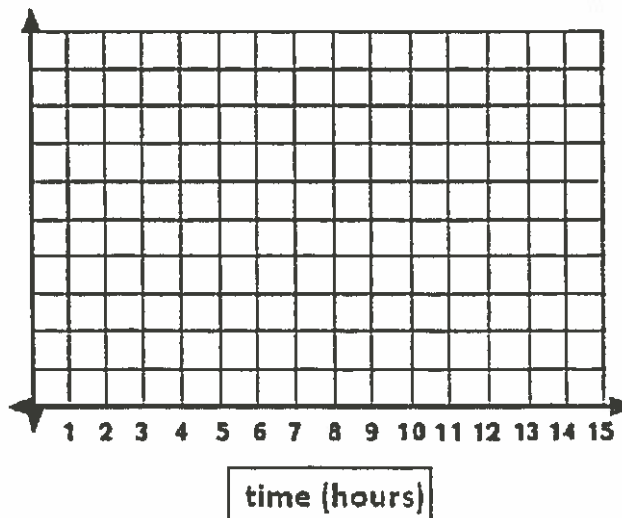
Real-Time: 1sec = 20min

Time (min)	# of Bacteria
0	2
20	4
40	8
60	16
80	32
100	64
120	128
140	256
160	512
180	1024
200	2048
220	4096



Real-Time: 60min = 1hr

Time (hr)	# of Bacteria



Key Ideas for Linear, Quadratic, & Exponential Graphs

	Linear	Quadratic	Exponential
Shape	Line	Parabola $\uparrow \downarrow$	A shooting Curve
Patterns in the Tables	y-values would add by a constant	Difference of the differences in y-values is constant	y-values multiply by a constant

Example 2 - Below are three stories about the population of a city over a period of time and four population-versus-time graphs. Two of the stories each correspond to a graph. Match the two graphs and the two stories.


Story 1: The population size grows at a constant rate for some time, then doesn't change for a while, and then grows at a constant rate once again.

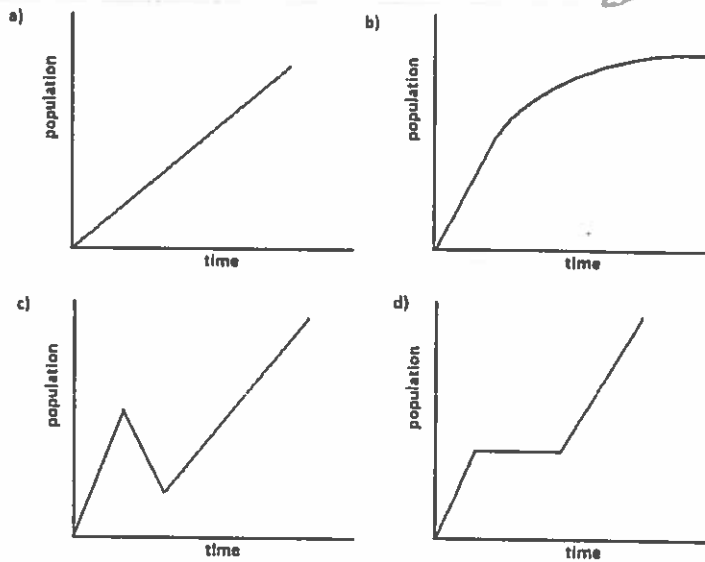
Story 2: The population size grows somewhat fast at first, and then the rate of growth slows.

Story 3: The population size declines to zero.

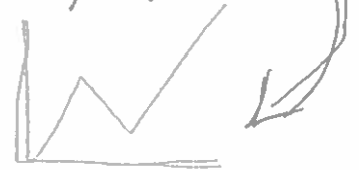
Story 1: Graph #2

Story 2: Graph #1

Story 3: 

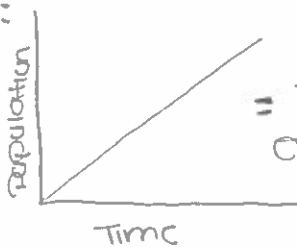


The population grows constant decrease constantly then increase constantly story C/graph =



Write stories for the two other graphs. Create a graph for the 3rd story.

Story A:



= It stayed @ a constant rate of change everything stayed the same