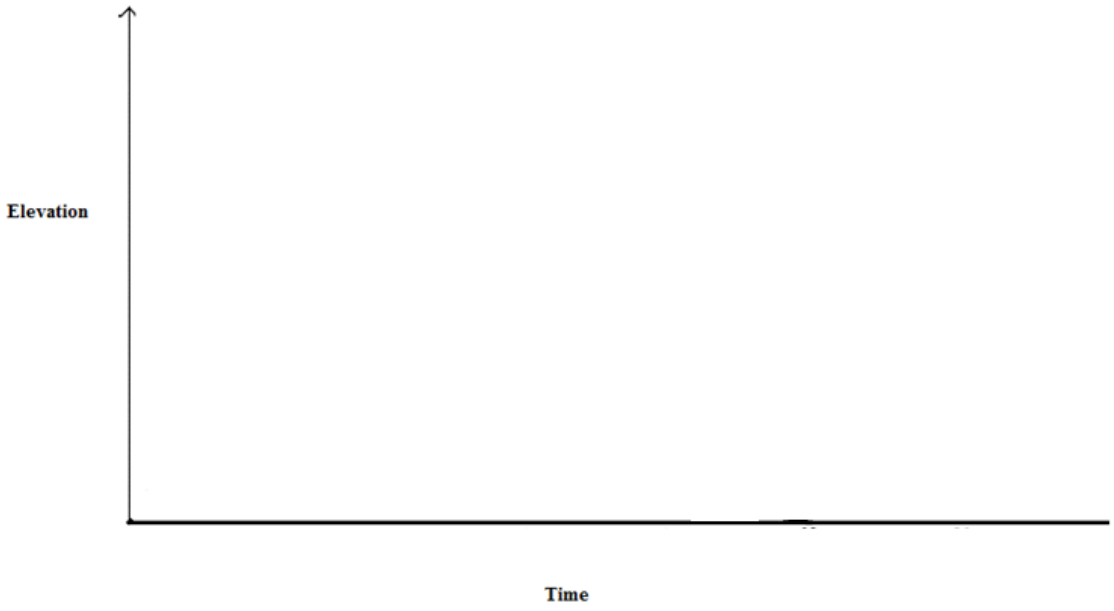
Name: _____ Date: _____

UNIT 6 **LESSON 2**

Do Now: Darryl lives on the third floor of his apartment building. His bike is locked up outside on the ground floor. At 3:00 p.m., he leaves to go run errands, but as he is walking down the stairs, he realizes he forgot his wallet. He goes back up the stairs to get it and then leaves again. As he tries to unlock his bike, he realizes that he forgot his keys. One last time, he goes back up the stairs to get his keys. He then unlocks his bike, and he is on his way at 3:10 p.m. Sketch a graph that depicts Darryl's change in elevation over time.



AIM: WHAT IS THE DIFFERENCE BETWEEN A QUADRATIC FUNCTION COMPARED TO AN EXPONENTIAL FUNCTION?

1. Which basketball will go in the hoop? Sketch the path of the basketball.

http://www.101qs.com/1195-will-it-hit-the-hoop

2. Man Jumping in Shallow Pool: Complete the table. Sketch the man's jump on the axes below.

https://www.youtube.com/watch?v=ZCFBC8aXz-g

Time (sec)	Elevation (ft)
	35.5
.25	36
.75	30
1	24
1.25	15
1.5	

REAL LIFE QUADRATIC FUNCTIONS

3. I am going to give you money this month for being such a good student. You have two choices.

Choice 1: I will give you $100,000 right now.

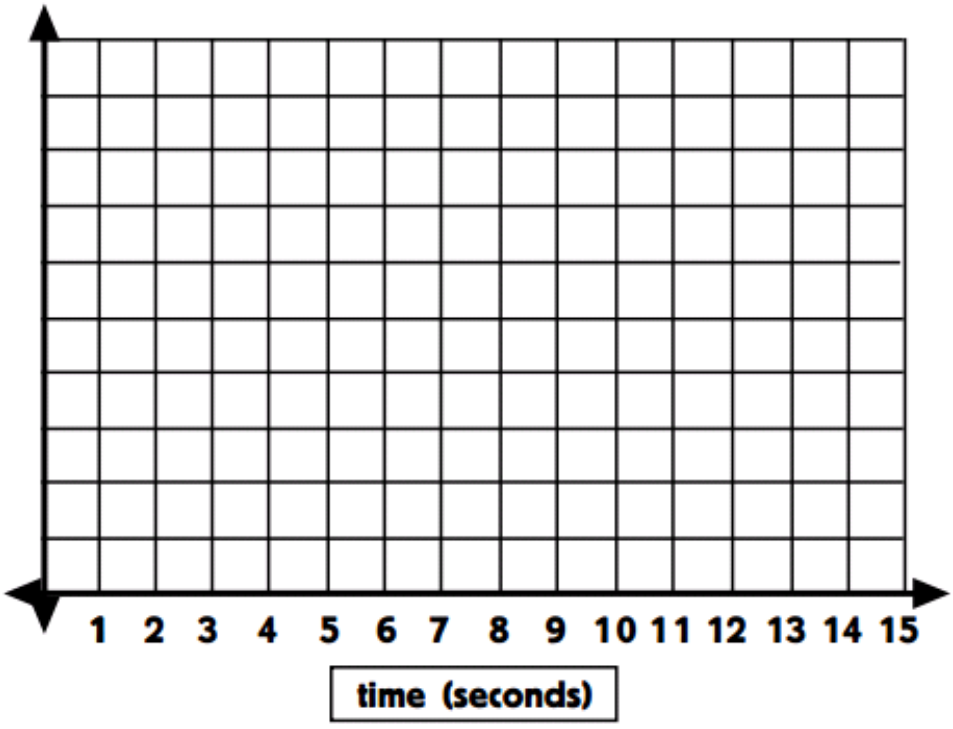
Choice 2: I will give you 1 penny on the first day of the month, then, double that amount every day. Whatever the amount is on day 31, you will get that amount.

a) Which choice will you make?_____

b) The situation above is a representation of which function?_____.

4. Below is a table of values for bacteria doubling every second. What type of graph do you predict this will be? Quadratic or Exponential? Graph this data. https://www.youtube.com/watch?v=gEwzDydciWc

Time (sec)	0	1	2	3	4	5	6	7
Number of bacteria	2	4	8	16	32	64	128	256



Name: _____ Date: _____

UNIT 6 **LESSON 2**

EXIT TICKET

1) Given the table below,

a. Identify which function represents the table_____

b. Explain your answer_____

c. Write the equation that represents this function_____

x	y
0	1
1	2
2	4
3	8
4	16
5	32
6	64

Name: _____ Date: _____

UNIT 6 **LESSON 2**

EXIT TICKET

1. Given the table below,

d. Identify which function represents the table_____

e. Explain your answer_____

f. Write the equation that represents this function_____

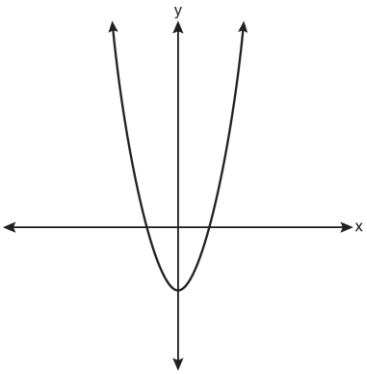
x	y
0	1
1	2
2	4
3	8
4	16
5	32
6	64

Name: _____ Date: _____

UNIT 6 **LESSON 2**

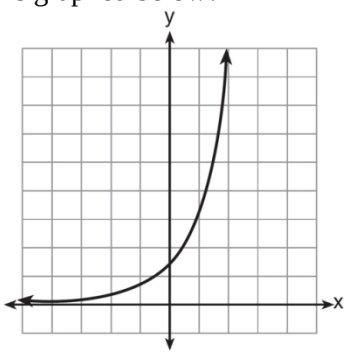
HW#_____

1. Which type of function is represented by the graph shown below?



1) absolute value
2) exponential
3) linear
4) quadratic

2. Which type of function is graphed below?



1) linear
2) quadratic
3) exponential
4) absolute value

3. Assume that a bacteria population doubles every hour. Which of the following three tables of data, with *x* representing time in hours and *y* the count of bacteria, could represent the bacteria population with respect to time?

a)

x	0	1	2	3	4	5	6
y	4	7	10	13	16	19	22

b)

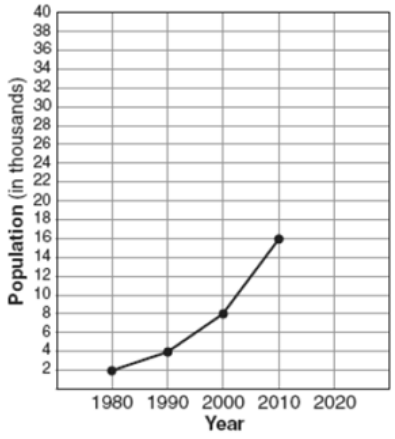
x	0	1	2	3	4	5	6
y	3	6	12	24	48	96	192

c)

x	0	1	2	3	4	5	6
y	1	3	7	13	21	31	43

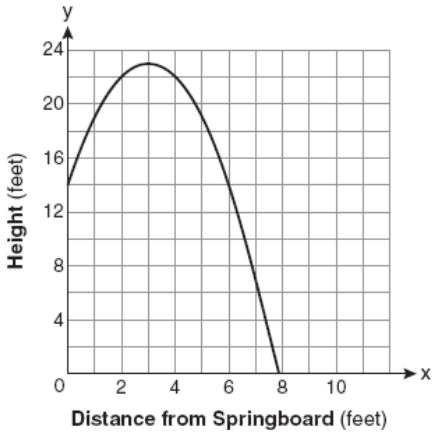
4. The growth population of Boomtown is shown below in the accompanying diagram. If the same pattern of population growth continues, what will the population of Boomtown be in the year 2020?

a) 32,000
b) 20,000
c) 64,000
d) 40,000



5. Identify the name of the graph below. _____

b. Write a story that represents this graph. Be specific and use accurate heights and distances when telling your story.

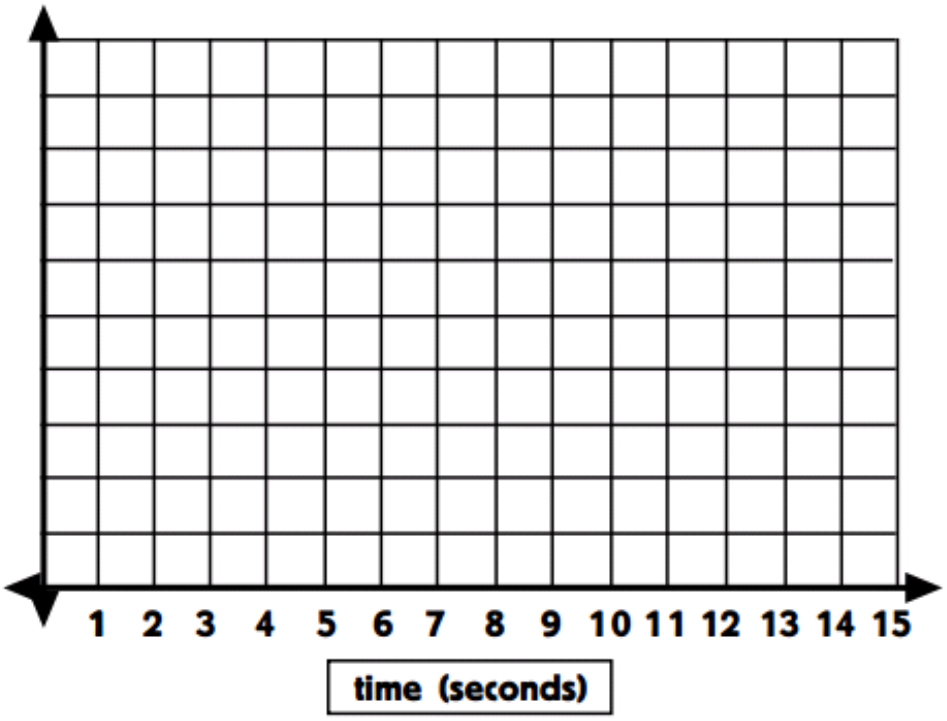


(Diving Board)

6. A man climbs down a ladder that is 10 feet high. At 0 seconds, his shoes are at 10 feet above the floor, and at 6

seconds, his shoes are at 3 feet. From 6 seconds to the 8.5 second mark, he drinks some water on the step 3 feet off the ground. After drinking the water, he takes 1.5 seconds to descend to the ground and then he walks into the kitchen. It takes the man a total of 15 seconds to complete his task.

Draw a graph that represents this story.



********DON'T FORGET TEXTBOOK!!!*******