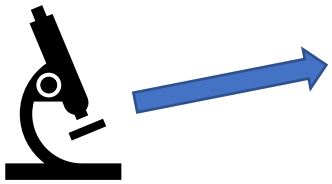
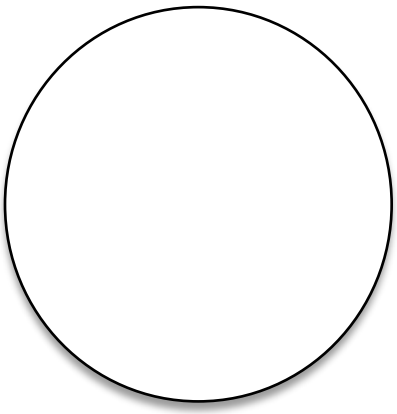
Name:_____

The Petri Dish!

Percent Change





You are a microbiologist studying the population growth of three microscopic critters.

Using the tip of a very fine needle, you deposit three different critters on the jelly-like food on the bottom of a petri dish. Draw what they might look like (magnified).

Name of each Critter:

_____

Each day, the population of this critter increases by 1.

Day	Population
1	1
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

_____

Each day until day 6, the population increases by 2. After that, it doubles.

Day	Population
1	1
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

_____

On day 1 to 4, the population triples. On day 5 and 6, there is no increase. After that, it decreases by 3 each day.

Day	Population
1	1
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

At this stage, you begin your mathematical analysis. You start with a few basics:

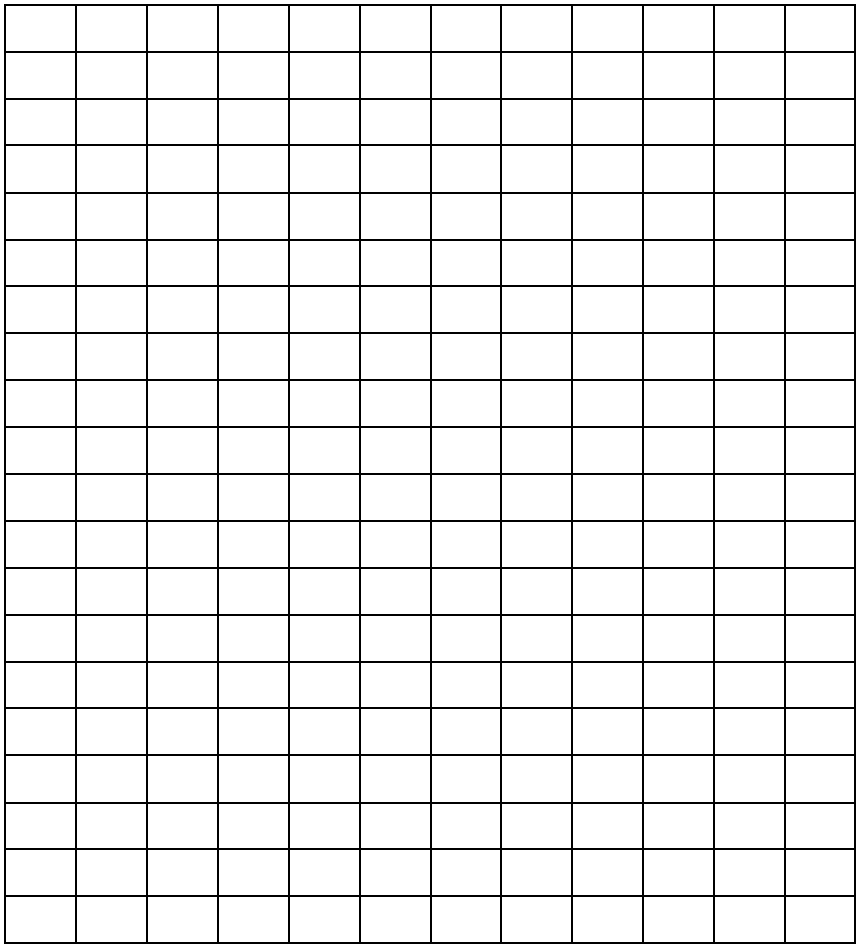
Total population of petri dish at day 12:	**Critter 1** Fraction: (of total population)	Percentage:	**Critter 2** Fraction: (of total population)	Percentage:	**Critter 3** Fraction: (of total population)	Percentage:

Workspace:

Name:_____

Line Graph

Make a line graph showing the growth of the different critters. Label the x and y axis. Include a title. Each critter will have its own line of growth. Make it clear which line belongs to which critter.



Describe what might be happening here:

Name:_____

Now it is time to describe the percentage change over the course of the twelve days.

For example, if a critters population was 6 on day 3 and then 18 on day 4, here's my work and how I would describe this change:

$6 \rightarrow 18 = +12 \qquad \frac{12}{6} = 2 \times 100 = 200\%$

Between day 3 and 4, the population increased 200%!

Choose Your Critter: _____

Describe the change in population of this critter:

Between Day 1 and Day 2:

Between Day 2 and Day 3:

Between Day 3 and Day 4:

Between Day 4 and Day 5:

Between Day 5 and Day 6:

Between Day 6 and Day 7:

Name:_____

Between Day 8 and Day 9:

Between Day 9 and Day 10:

Between Day 10 and Day 11:

Between Day 11 and Day 12:

Final Thoughts:

What do you notice about the percentage change over time?

Look at the data on all three critters. Which one do you think has the most dramatic population story? How would you describe it? Try to use percentage change in your description of the most interesting parts in the story of that critter. What do you think was happening to cause that population growth pattern?