Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4/19/16 Notes for Caffeine

***What do you already know?***

1. What is a drug? (Work in groups to come up with 1-3 criteria)
2. What do you already know about caffeine?

***Notes***

1. Summarize what you learned during the lesson
2. What is the difference between a stimulant and a source of energy?
3. Web Search: Find “reputable” information online for recommended caffeine consumption and its proper use or misuse.

**Write Exponential Equations**

Do table before equation. Check if your equation matches your table. Remember the M&M’s.

“a” = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and “b”=\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| **Scenario** | **Table** | | **Variables (# and words) &Equation** |
| You start with 100 M&M’s. Each minute, you eat half the M&M’s. Write a function, f(x), for the total number of M&M's you have gotten over x hours. | minute | Number of M&M’s | a =  b =  f(x) = |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| You start with 100 M&M’s. Each hour, you get double the number of M&M’s. Write a function, f(x), for the total number of M&M's you have gotten over x hours. | Hours | Number of M&M’s |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| A person gives away 1 penny on day zero, 2 pennies the 1st day, 4 pennies the 2nd day, 8 pennies the 3rd day, 16 pennies the 4th day. Write a function, f(x), for the total number of pennies after x days | Day | Number of pennies |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| You start with 1 bacteria. You triple the number of bacteria each day. Write a function, f(x), for the total number of bacteria after x days. | Day | Number of bacteria |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| You start with 1 M&M. You quadruple (multiply by 4) the number of M&M's each day. Write a function, f(x), for the total number of M&M's after x days. | Day | Number of M&M’s |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| A pair of rabbits has 1 baby to start with. Each month, they have 6 times as many rabbits as the month before. Write a function, f(x), for the number of baby rabbits. | Month | # of rabbits |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |