Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |
| --- |
| **Use the following to review for you test. Work the Practice Problems on a separate sheet of paper.** |
| **What you need to know & be able to do** | **Things to remember** | **Problem** | **Problem** |
| **Arithmetic Sequences** | * Gives the First Term
* Adding or Subtracting to get to the next term
* Explicit:
*
* Recursive:
*
 | 1. Write the explicit and recursive rules for the following sequence

-5, 2, 9, 16, …1. Find the 10th term
 | 1. Write the explicit rule for the following sequence

-15, -13, -11, -9, …1. 7 is the \_\_\_\_th term of the sequence
 |
| **Geometic Sequences**  | * Gives the First Term
* Multiplying or Dividing to get to the next term
* Explicit
*
* Recursive
*
 | 1. Write the explicit and recursive rules for the following sequence

3, 6, 12, 24, 48, …1. Find the 15th term
 | 1. Kell has 324 kids that show up to try out for baseball on the first day. If a third get cut each day, write a sequence for the scenario.
2. How many baseball players are left after 3 days?
 |
| **Solving Exponential Equations** | * Must have SAME base
* Set exponents = (don’t forget to distribute)
* Solve for x
 | 1.
 | 1.
 |
| 1.
 | 1.
 |
| **Characteristics of Functions** | * Locate the asymptote (k)
* Use your calculator or desmos.com to find 3 good points
* Sketch
 | 1. [image]Graph the funtion

Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Describe the transformations** | See notes for stretch, shrink, left, right, up, down or reflect | 1.
2.
 |
| **Growth and Decay Models** | * Growth:
* Decay:
* Factor: whole parentheses
* Rate: Percent
 | 1. The population for Kennesaw in 2000 was 25,000. Since then, the population has grown at a rate of 3.2% each year. Write an equation to represent the population of Powder Springs since 2000.

b. According to the equation, what will the population be in the year 2016? | c. Mr. Gossett is a machinist. He bought some new machinery for about $125,000. If the machinery depreciates at the rate of 15% per year, what is the value of the machinery at the end of 10 years? |
| **Compound Interest** | *
* Annually = 1
* Biannually = 2
* Quarterly = 4
* Monthly = 12
* Weekly = 52
* Daily = 365
 | 1. $20,000 is invested at a rate of 3% and is compounded annually.

Equation: How much money will there be in the account after 8 years? | 1. $27,000 is invested at a rate of 3.75% and is compounded quarterly.

Equation: 1. How much money will there be in 3 years?
 |
|  |  |  |  |