

Name: _____

Period: _____

Mod 1 Review

Classify as each function the following two ways:

- (a) Arithmetic/Geometric
- (b) Recursive/Explicit Function

1. $h(x) = 3x + 1$
2. $m(t) = m(t - 1) + 4$
3. $f(x) = 3 \cdot f(x - 1)$
4. $r(x) = 4(x - 1) + 1$
5. $f(t) = 4 \cdot 3^t$

Create a table for each of the following functions:

6. $y(x) = -2 \cdot 5^{x-1}$ 7. $g(x) = g(x - 1) + 3$
 $g(1) = 1$

8. $h(x) = -5(x - 1) + 2$

Decide if the following tables are **Arithmetic or Geometric**.

9.

x	f(x)
0	4
1	11
2	18
3	25

10.

x	f(x)
1	4
2	12
3	36
4	108

11.

x	f(x)
3	12
4	24
5	48
6	96

12. Fill in the **arithmetic means**:

x	1	2	3	4	5
y	18				-10

x	1	2	3	4	5	6	7
y	12						-6

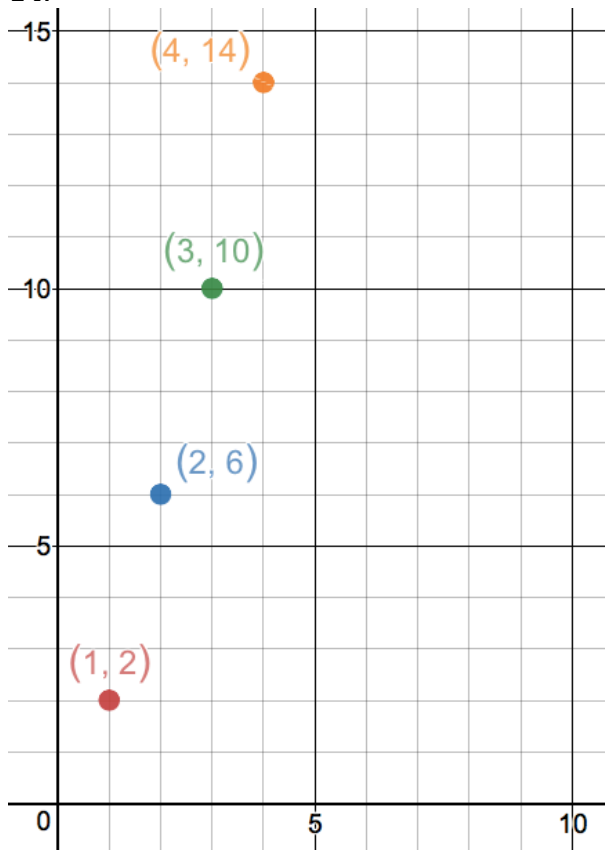
13. Fill in the **geometric means**:

x	1	2	3	4	5
y	6				96

x	1	2	3	4	5	6
y	4					972

For #14-23: Given the graph, description or sequence values create both **an Explicit and a Recursive Function. **Don't forget your initial value!!!****

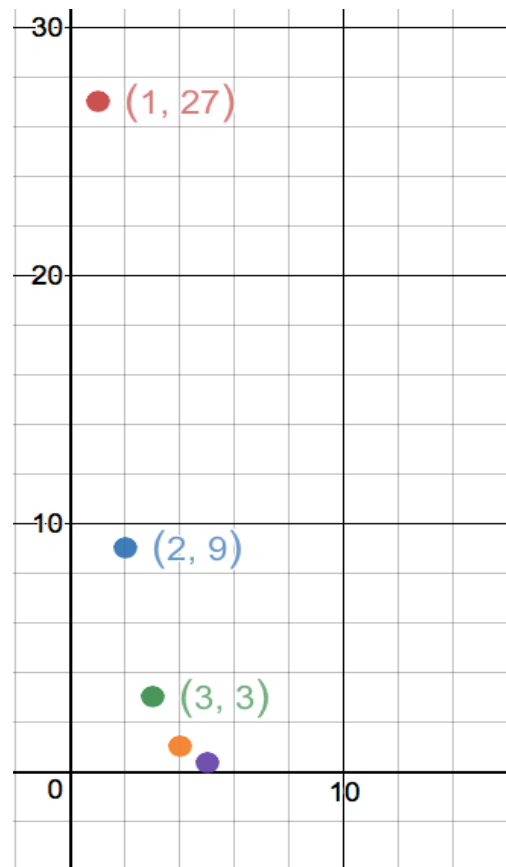
14.



Recursive:

Explicit:

15.



Recursive:

Explicit:

16.

x	f(x)
0	4
1	11
2	18
3	25

Recursive:

Explicit:

17.

x	f(x)
1	4
2	12
3	36
4	108

Recursive:

Explicit:

18.

x	f(x)
3	12
4	24
5	48
6	96

Recursive:

Explicit:

19. Ashley has a bank account with 500 dollars in. After 1 week she decides to take out 10 dollars to buy ice cream. She continues this of taking out 10 dollars for ice cream every week.

Recursive:

Explicit:

20. Happy Halloween! At the start of October the Carlson family begins what they call the "BOO". They doorbell ditch treats onto 2 families porches with a note instructing them to pass it forward by leaving treats on 2 other families porches the next night. Every family continues this pattern of leaving a treat on 2 other families porches along with the note instructing them to pass it forward.

Recursive:

Explicit:

21. Klayton loves to play football. He currently does 35 push ups a day to help him stay in shape. He is a lineman however so to help him get ready for football season he decides to add 3 more push to his routine every day.

Recursive:

Explicit:

22. Amie just landed a part time job teaching Zumba at a local gym. She makes \$10,000 a year. The gym she will work for guarantees a 4% pay increase each year! At the end of the 1st year Amie will have made \$10,000 dollars.

Recursive (representing Amie's Salary):

Explicit (representing Amie's Salary):

23. The first term in a sequence is 35. The sequence decreases by 22% each term.

Recursive:

Explicit: