

Assignment 1.6 – Geometric Sequences

Fill in the table, then write a sentence explaining how you figured out the values to put in each cell.

1.

x	0	1	2	3	4	5	6
$f(x)$	3	6	12				
change							

Common Ratio:

Explicit Equation:

Recursive Equation:

2. Claire has \$300 in an account. She decides she is going to take out half of whatever is left in the account at the end of the month.

# of months	0	1	2	3	4
Amount of money left in the account					
change					

Common Ratio:

Explicit Equation:

Recursive Equation:

3. Tania creates a chain letter and sends it to four friends. Each day each friend is then instructed to send the letter to four more friends and so on.

# of days	1	2	3	4	5
Total amount of letters sent					
change					

Common Ratio:

Explicit Equation:

Recursive Equation

Use the given information to decide which equation will be the easiest to use to find the indicated value. Find the value and explain your choice.

<p>4. The value of the 4th term is 80. The sequence is being doubled at each step.</p> <p>Explicit equation: $y = 5(2^x)$ Recursive: $new = previous \cdot 2$</p> <p>Find the value of the 5th term. _____ Explanation:</p>	<p>Using the same information from the previous problem to the left.</p> <p>The value of the 4th term is 80. The sequence is being doubled at each step.</p> <p>Find the value of the 7th term. _____ Explanation:</p>
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Refresh Your Memory

5. Write the recursive and explicit functions for each arithmetic sequence.

a.

x	$f(x)$	Change
0	-10	
1	-6	
2	-2	
3	2	
4		
5		

Recursive Equation:

Explicit Equation:

b. A theater has 30 seats in the first row of the center section. Each row behind the first row gains two additional seats.

Row#	1	2	3	4
Amount of seats				
Change				

Recursive Equation:

Explicit Equation: