

Notes 1.9 - Sequences

No Warmup – Quiz Today

Lesson – Revisiting Means & Sequences in Context

Practice finding the Means, show all steps to finding the common difference or common ratio.

a) arithmetic

Term	1	2	3	4	5
Value	54				70

Common
Difference

b) arithmetic

Term	1	2	3	4
Value	43			22

Common
Difference

c) geometric

(use your calculator to help with fractions)

Term	1	2	3	4	5
Value	500				$\frac{4}{5}$

Common
Ratio

d) geometric

Term	1	2	3	4
Value	$\frac{1}{2}$			32

Common
Ratio

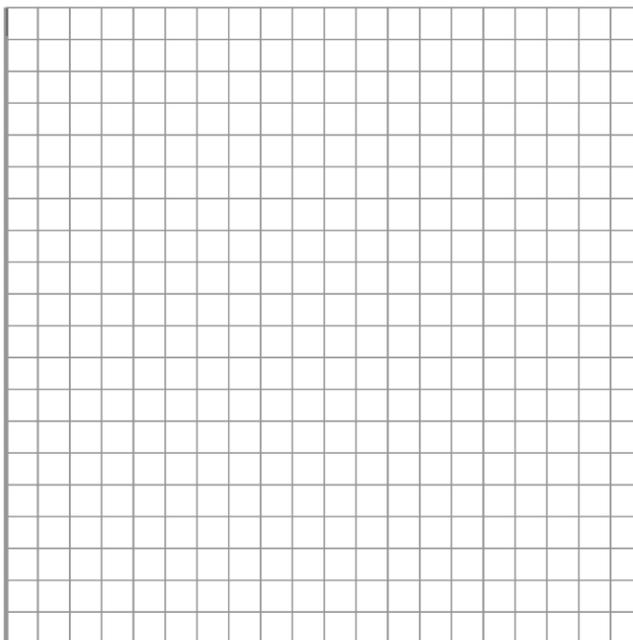
Sequences in Context – For each of the given context, you will need to create a table, determine if the sequence is arithmetic or geometric, write the equations, and then graph the sequence using an appropriate scale.

- e) A car loses 10% of it's value each year, write a sequence to show the value if the car was \$26,000 when it was purchased.

Arithmetic or Geometric

Recursive Equation

Explicit Equation

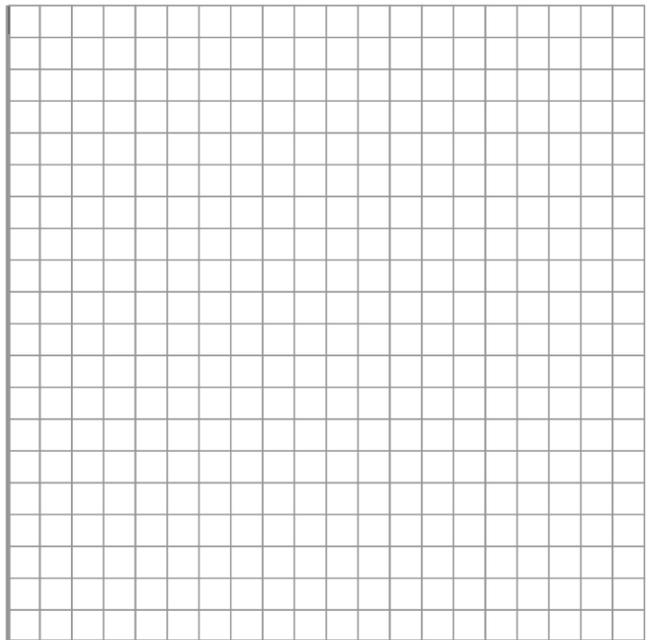


- f) Parker made a batch of cookies, totaling 48 cookies. If each of three members of the family have two cookies a day, model the number of cookies remaining.

Arithmetic or Geometric

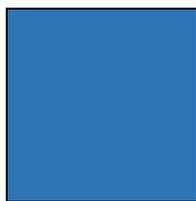
Recursive Equation

Explicit Equation

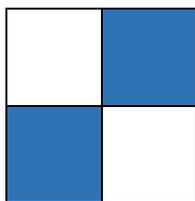


When will there be no cookies remaining? Prove how you know this answer is correct in two ways.

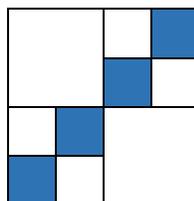
g) Use the given visual sequence to determine how many dark squares there will be at each step. Sketch step 4 if that is helpful.



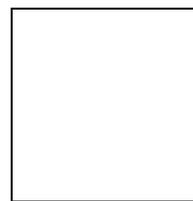
Step 1



Step 2



Step 3

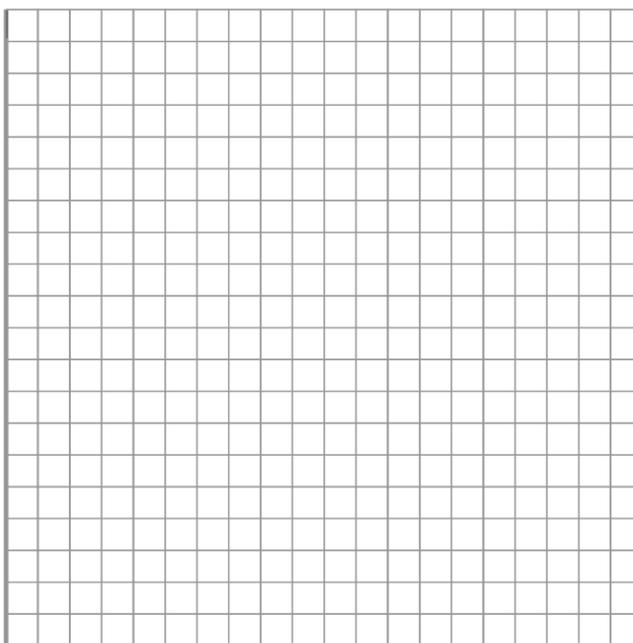


Step 4

Arithmetic or Geometric

Recursive Equation

Explicit Equation

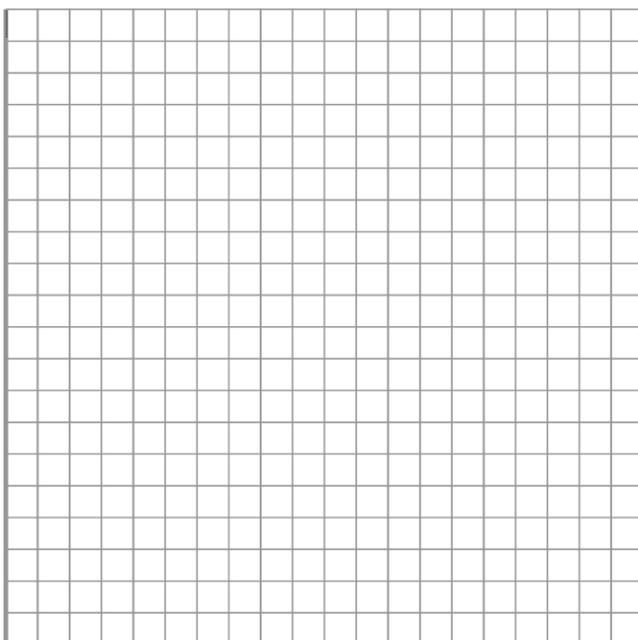


h) Maggie started with 18 marbles in her collection. Model Maggie's marble collection if she gets four more marbles each week.

Arithmetic or Geometric

Recursive Equation

Explicit Equation



When does it make sense to extend the table or put more information on the graph?