NAME:_____ Period:_____ Score:_____/_____=_____%=_____

HW 4-6

Sec 1 Multiple Representations of Arith. & Geo. Seq. Unit 4

1. What are the differences between and arithmetic and geometric sequences?

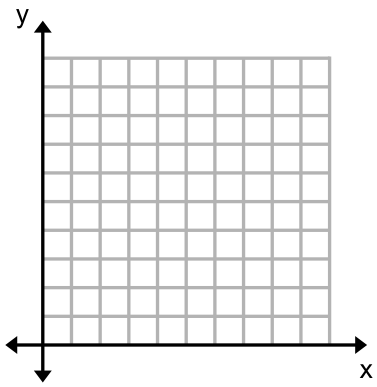
Use the following information to complete the other representations of the sequence.

2.

Table:

Days	Cost
1	8
2	16
3	24
4	32

Graph:



Recursive Equation:

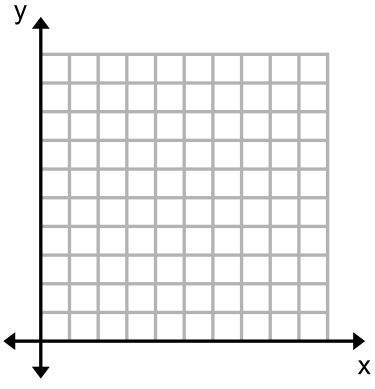
Explicit Equation:

Create a Context:

3.

Table:

Graph:



Recursive Equation:

$$f(1)=4;\ f(n)=f(n-1)+3$$

Explicit Equation:

Create a Context:

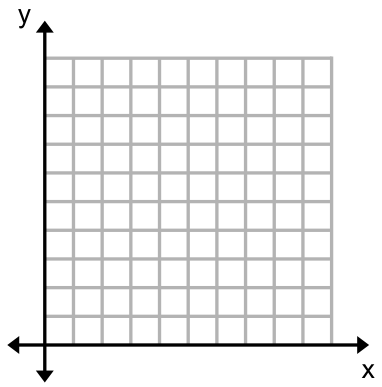
Use the following information to complete the other representations of the sequence.

4.

Table:

x	*y*
1	32
2	16
3	8
4	4

Graph:



Recursive Equation:

Explicit Equation:

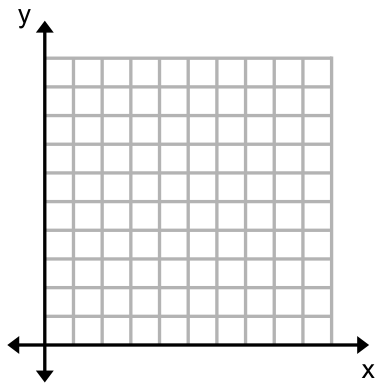
Create a Context:

5.

Table:

x	*y*

Graph:



Recursive Equation:

Explicit Equation:

Create a Context:

Janet wants to know how many seats are in each row of the theater. Jamal lets her know that each row has 2 seats more than the row in front of it. The first row has 14 seats.

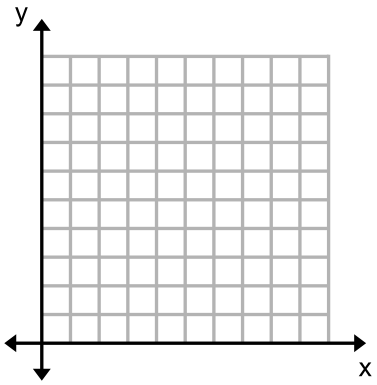
Use the following information to complete the other representations of the sequence.

6.

Table:

x	*y*

Graph:



Recursive Equation:

Explicit Equation:

$$f(n) = 4 \cdot 5^{n-1}$$

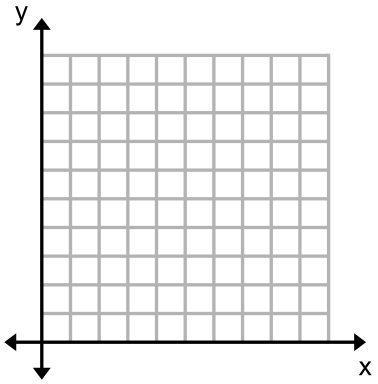
Create a Context:

7.

Table:

x	*y*

Graph:



Recursive Equation:

Explicit Equation:

Create a Context:

Sarah's savings account currently has $200. Each month she doubles her money in her savings account. What is the balance at the end of each month?

Given the recursive equation, find the explicit equation.

8. $f(x) = f(x-1) + 4;\ f(1) = -3$

9. $f(x) = f(x-1) \bullet 2;\ f(1) = 9$

10. $f(x) = f(x-1) - 5;\ f(-3) = -2$

11. $f(x) = \frac{1}{3} f(x-1);\ f(-4) = 10$

Given the explicit equation, find the recursive equation.

12. $f(x) = 6 \bullet 4^{x-5}$

13. $f(x) = -8x + 11$

14. $f(x) = -9 \bullet \left(\frac{1}{5}\right)^{x+8}$

15. $f(x) = 3x - 8$