1.11

READY, SET, GO! **Name** **Period** **Date**

READY

Topic: Comparing linear equations and arithmetic sequences

1. Describe the similarities and differences between linear equations and arithmetic sequences.

Similarities	Differences

SET

Topic: Representations of arithmetic sequences

Use the given information to complete the other representations for each arithmetic sequence.

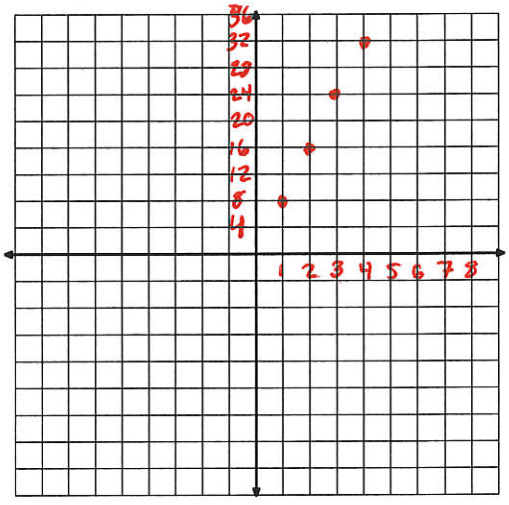
2. **Recursive Equation:** $f(n) = f(n-1) + 8$, $f(1) = 8$

Explicit Equation: $f(n) = 8n$ or $f(n) = 8 + 8(n-1)$

Table

Days	Cost
1	8
2	16
3	24
4	32

Graph



Create a context

mathematics vision project

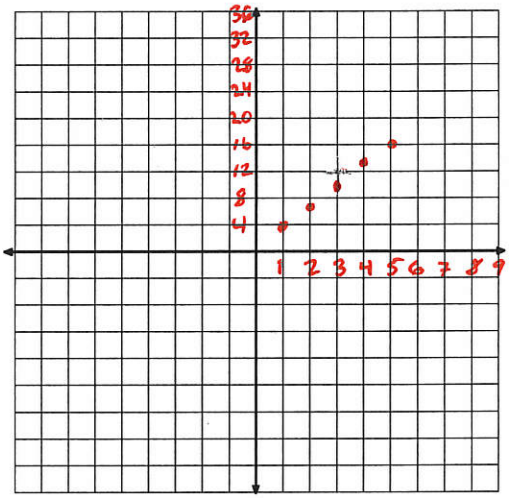
3. **Recursive Equation:** $f(1) = 4, \quad f(n) = f(n-1) + 3$

Explicit Equation: $f(n) = 4 + 3(n-1)$

Table

day	Cookies
1	4
2	7
3	10
4	13
5	16

Graph



Create a context

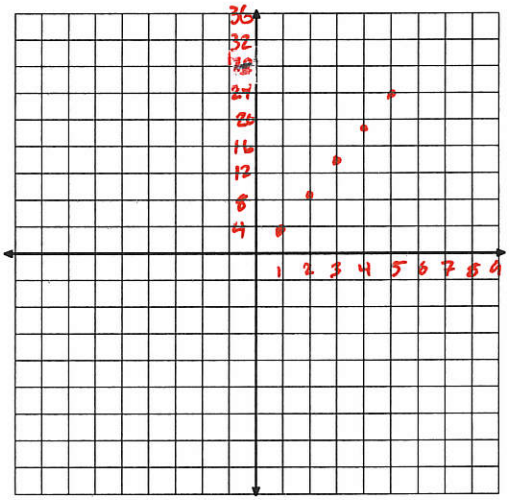
4. **Recursive Equation:** $f(n) = f(n-1) + 5$, $f(1) = 4$

Explicit Equation: $f(n) = 4 + 5(n-1)$

Table

1	4
2	9
3	14
4	19
5	24

Graph



Create a context

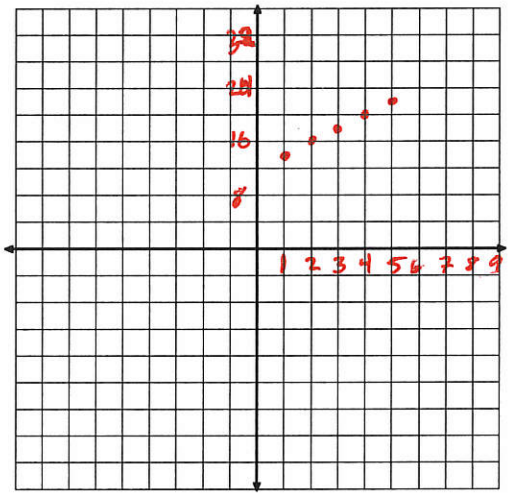
5. **Recursive Equation:** $f(n) = f(n-1) + 2$, $f(1) = 14$

Explicit Equation: $f(n) = 14 + 2(n-1)$ or $f(n) = 12 + 2n$

Table

1	14
2	16
3	18
4	20
5	22

Graph



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.

GO

Topic: Writing explicit equations

Given the recursive equation for each arithmetic sequence, write the explicit equation.

6. $f(n) = f(n-1) - 2; f(1) = 8$

$f(n) = 8 - 2(n-1)$ or $f(n) = 10 - 2n$

7. $f(n) = 5 + f(n-1); f(1) = 0$

$f(n) = 5(n-1)$ or $f(n) = -5 + 5(n)$

8. $f(n) = f(n-1) + 1; f(1) = \frac{5}{3}$

$f(n) = \frac{5}{3} + (n-1)$ or $f(n) = n + \frac{2}{3}$