1. Arithmetic sequences occur when there is a constant rate of change (adding by the same amount every time). Geometric sequences occur when there is a common ratio (multiplying by the same amount every time).

3. Table:

x	y
1	4
2	7
3	10
4	13
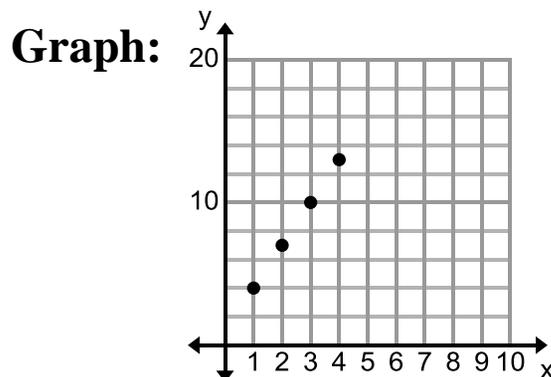
Graph:

Explicit Equation: $f(x) = 3x - 1$

Context: *Answers May Vary*

5. Table:

x	y
1	14
2	16
3	18
4	20
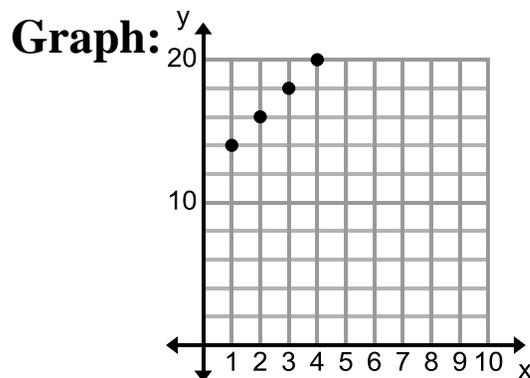
Graph:

Recursive Equation:
$$f(x) = f(x-1) + 2;\ f(1) = 14$$

Explicit Equation: $f(x) = 2x + 12$

Context: *Answers May Vary*

7. **Table:**

x	y
0	200
1	400
2	800
3	1600

Graph:
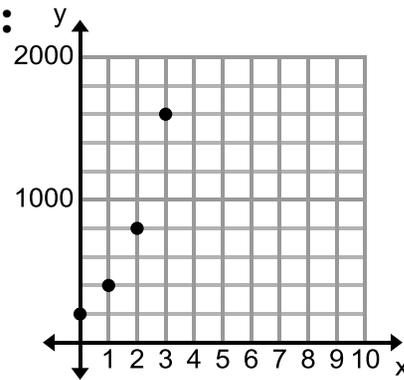
Recursive Equation:

$$f(x)=f(x-1)\cdot 2;\ f(0)=200$$

Explicit Equation:

$$f(x)=200\cdot 2^x$$

Context: *Answers May Vary*

9. $f(x)=9(2)^{x-1}$

11. $f(x)=10\left(\dfrac{1}{3}\right)^{x+4}$

13. $f(x)=f(x-1)-8;\ f(0)=11$

15. $f(x)=f(x-1)-9;\ f(0)=-112$ or $f(-13)=5$