Name Key Date _____ Hour _____ Score

4.6 Day 2 - Arithmetic Sequences Practice ws

Write the recursive and explicit formulas for each arithmetic sequence. Use your equation to complete the table!

1)

1	6
2	7
3	8
...	...
10	15
100	105
150	155

R: $a_1 = 6,\ a_n = a_{n-1} + 1$

E: $a_n = 6 + 1(n-1)$

2)

1	7
2	11
3	15
...	...
10	43
100	403
150	603

R: $a_1 = 7,\ a_n = a_{n-1} + 4$

E: $a_n = 7 + 4(n-1)$

3)

1	3
2	7
3	11
4	15
...	...
10	39
100	399
150	599

R: $a_1 = 3,\ a_n = a_{n-1} + 4$

E: $a_n = 3 + 4(n-1)$

4)

1	0
2	1
4	3
6	5
...	...
10	9
100	99
150	149

R: $a_1 = 0,\ a_n = a_{n-1} + 1$

E: $a_n = 0 + 1(n-1)$

5)

1	3
2	6
3	9
...	...
10	30
100	300
150	450

R: $a_1 = 3,\ a_n = a_{n-1} + 3$

E: $a_n = 3 + 3(n-1)$

6)

1	8
2	13
3	18
...	...
10	53
100	503
150	753

R: $a_1 = 8,\ a_n = a_{n-1} + 5$

E: $a_n = 8 + 5(n-1)$

7)

1/2	1/6
3	11
4	16
5	21
...	...
10	46
100	496
150	746

R: $a_1 = 1,\ a_n = a_{n-1} + 5$

E: $a_n = 1 + 5(n-1)$

8)

1	8
2	12
3	16
...	...
10	44
100	404
150	604

R: $a_1 = 8,\ a_n = a_{n-1} + 4$

E: $a_n = 8 + 4(n-1)$

9)

1	1
2	3
3	5
4	7
...	...
10	19
100	199
150	299

R: $a_1 = 1,\ a_n = a_{n-1} + 2$

E: $a_n = 1 + 2(n-1)$

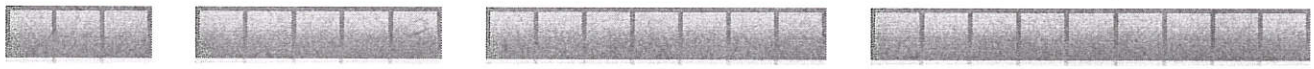
Write the recursive and explicit formulas for each arithmetic sequence.

y represents the number of boxes at each step "x"

10) x = 1 x = 2 x = 3 x = 4

R: $a_1 = 1,\ a_n = a_{n-1} + 3$ E: $a_n = 1 + 3(n-1)$

11) x = 0 x = 1 x = 2 x = 3



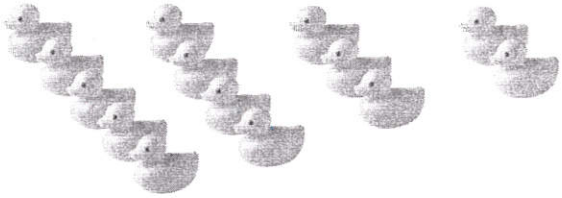
R: $a_0 = 3,\ a_n = a_{n-1} + 2$ E: $a_n = 3 + 2(n-0)$ or

R: $a_1 = 5,\ a_n = a_{n-1} + 2$ E: $a_n = 5 + 2(n-1)$

y represents the number of ducks in each row "x"

x=1: 1 duck

12) x = 0 x = 1 x = 2 x = 3



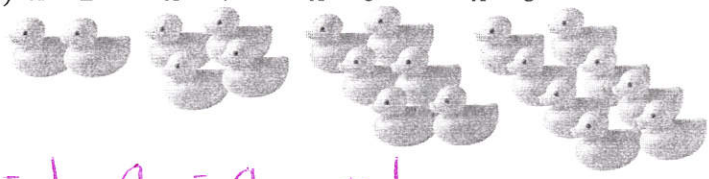
R: $a_0 = 5,\ a_n = a_{n-1} - 1$ or

E: $a_n = 5 - 1(n-0)$

R: $a_0 = 4,\ a_n = a_{n-1} - 1$

E: $a_n = 4 + (n-1)(-1)$

13) x = 2 x = 4 x = 6 x = 8



R: $a_1 = 1,\ a_n = a_{n-1} + 1$

E: $a_n = 1 + 1(n-1)$

y represents the number of dots at each step "x"

14) x = 1 x = 2 x = 3 x = 4

R: $a_1 = 4,\ a_n = a_{n-1} + 4$ E: $a_n = 4 + 4(n-1)$

15) x = 0 x = 1 x = 2 x = 3

R: $a_0 = 3,\ a_n = a_{n-1} + 2$

R: $a_1 = 5,\ a_n = a_{n-1} + 2$

E: $a_n = 3 + 2(n-0)$ or

E: $a_n = 5 + 2(n-1)$

16) x = 3 x = 6 x = 9 x = 12

R: $a_3 = 4,\ a_n = a_{n-3} + 4$

or

$a_1 = \frac{4}{3},\ a_n = a_{n-1} + \frac{4}{3}$

E: $a_n = \frac{4}{3} + \frac{4}{3}(n-1)$

$m = \frac{4}{3}$

c	0
1	4/3
2	8/3
3	4
6	8
9	12
12	16