Name _____ Date _____

4.6 Worksheet #1

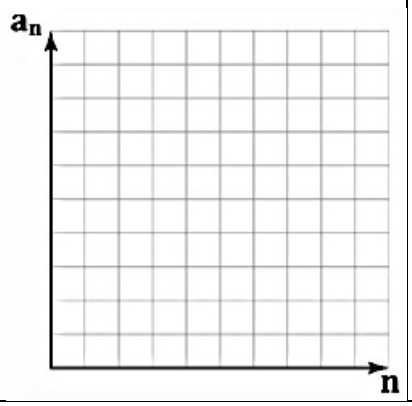
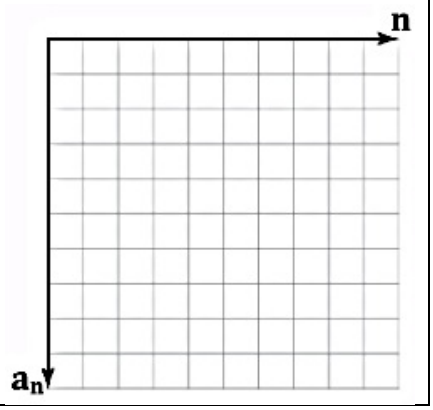
In Exercises 1 and 2, write the next three terms of the arithmetic sequence.

1. First term: 3 Common difference: 11 _____, _____, _____	2. First term: 15 Common difference: - 4 _____, _____, _____

In Exercises 3–6, State the first term and the common difference of the arithmetic sequence. Then, write the next three terms of the sequence.

3. 9, 15, 21, 27, …	4. 240, 210, 180, 150, …
5. −15, −10, −5, 0, …	6. $2, 2\frac{1}{4}, 2\frac{1}{2}, 2\frac{3}{4}, \ldots$

In Exercises 7 and 8, graph the arithmetic sequence.

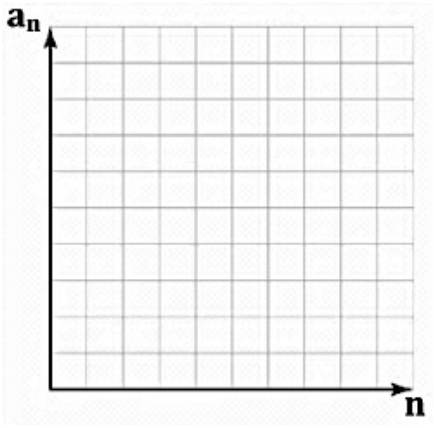
7. 3, 10, 17, 24, … 	8. −2, −6, −10, −14, … 

In Exercises 7-9, Determine if the sequence is arithmetic. Explain.

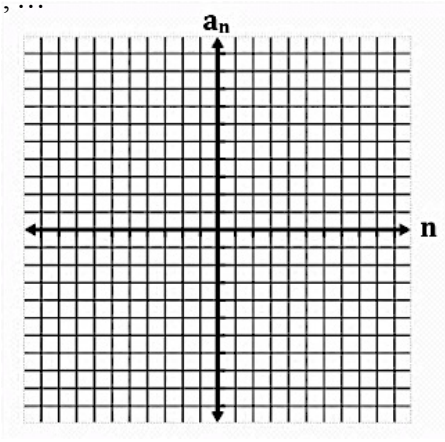
9. 12, 17, 21, 26, …	10. $\frac{5}{2}, \frac{9}{2}, \frac{13}{2}, \frac{17}{2}, \ldots$	11. 43, 39, 35, 31, …

In Exercises 12 and 13, graph the sequence. Then, determine whether the sequence is arithmetic. If so, find the common difference.

12. 2,4, 8, 16, …



13. −10, −3, 4, 11, …



Exercises 14–16, write an equation for the *n*th term of the arithmetic sequence. Then, find the 15th term of the arithmetic sequence.

$$a_n = a_1 + (n - 1)d$$

14. −3, −1, 1, 3, …

15. 2, −3, −8, −13, …

16. $4\frac{1}{2}$, 6, $7\frac{1}{2}$, 9, …

17. The height (in feet) of the water in a tank each hour after opening its drain can be estimated by the sequence in the table.

Hours after opening drain	1	2	3	4
Height (feet)	18	15	12	9

a. Write a function that represents the arithmetic sequence.

b. Find and interpret the next three terms.