### 4.6 Arithmetic Sequences

Sequences

Term

Arithmetic Sequences

Common Difference


State the first term, and the common difference. Then, write the next three terms of the arithmetic sequence.

| $1.1,8,15,22, \ldots$ | 2. $20,14,8,2, \ldots$ | 3. $\frac{1}{4}, \frac{5}{4}, \frac{9}{4}, \frac{13}{4}, \ldots$ |
| :--- | :--- | :--- |
|  |  |  |

Graph the arithmetic sequence.
4. $1,3,5,7, \ldots$

5. $10,7,4,1, \ldots$

6. $1,2.5,4,5.5, \ldots$


Determine if the sequence is arithmetic. Explain.

8. $20,30,40,50, \ldots$

10. $48,24,12,6$,..

$$
a_{n}=a_{1}+(n-1) d
$$

Write an equation for the $n$th term of the arithmetic sequence. Then find $a_{10}$.
11. $-11,-9,-7,-5, \ldots$
12. 16.3, 14.8, 13.3, 11.8,...
15. In an auditorium, the first row of seats has 30 seats. Each row behind the first row has 4 more seats than the row in front of it. How many seats are in the 25th row?

