



## 3-4 Additional Practice

### Arithmetic Sequences

Tell whether or not each sequence is an arithmetic sequence. If it is an arithmetic sequence, give the common difference.

1. 4, 8, 12, 16, ...

2. -11, 5, 0, 6, ...

3. 12, 23, 34, 45, ...

Write a recursive formula and an explicit formula for each arithmetic sequence.

4. 9, 15, 21, 27, ...

5. 1.5, 2.25, 3, 3.75, ...

6. 7, 0, -7, -14, ...

Recursive:

Recursive:

Recursive:

Explicit:

Explicit:

Explicit:

Write an explicit formula for each recursive formula and a recursive formula for each explicit formula.

7.  $a_1 = 5$

$$a_n = a_{n-1} + 3$$

8.  $a_1 = -8$

$$a_n = a_{n-1} - 3$$

9.  $a_n = 15 + 4n$

10. You are given the first four terms of an arithmetic sequence. Why might you use a recursive formula? Why might you use an explicit formula? Under what conditions might a recursive formula be preferred over the explicit formula? Under what conditions might an explicit formula be preferred over the recursive formula?

11. You open a savings account with a \$400 deposit. Each month after that, you deposit \$25. Write an explicit rule to represent the amount of money you deposit into your savings account. How much money will you have in the account on month 12?