

Chapter 5 Expressions

Lesson 5-2 Sequences

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- 3** Describe the relationship between the terms in the arithmetic sequence 26, 34, 42, 50, Then write the next three terms in each sequence.

Each term is found by adding 8 to the previous term. Continue the pattern to find the next three terms.

$$50 + 8 = 58$$

$$58 + 8 = 66$$

$$66 + 8 = 74$$

The next three terms are 58, 66, and 74.

- 7** Refer to the table shown. If the pattern continues, what algebraic expression can be used to find the plant's height for any month? What will be the plant's height at 12 months?

Each term is 3 times the number of months. So, the expression is $3n$.

$$\begin{aligned} 3n &= 3(12) \quad \text{Replace } n \text{ with } 12. \\ &= 36 \end{aligned}$$

At the end of 12 months, the plant will be 36 inches high.

| Month | Height (in.) |
|-------|--------------|
| 1 | 3 |
| 2 | 6 |
| 3 | 9 |