Sequences

Name _____

Key Concept and Vocabulary

A **sequence** is a series of numbers. Each number in a sequence is called a **term**. You can identify patterns to find missing terms of a sequence.

Sequence:

Each term is 2 more than the previous term.

3,   5,   7,   9,   ?,   ?,   . . .

+2   +2   +2   +2   +2

Fifth term: 9 + 2 = 11
Sixth term: 11 + 2 = 13

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Check your answers at BigIdeasMath.com.

Find the sixth term of the sequence.

1. 0, 1, 2, 3, . . .

2. 100, 90, 80, 70, . . .

3. 8, 16, 32, 64, . . .

4. $9, 3, 1, \frac{1}{3}, \ldots$

Find the tenth term of the sequence.

5. 9.2, 8.8, 8.4, 8.0, . . .

6. $\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}, \ldots$

7. 256, 128, 64, 32, . . .

8. $\frac{1}{25}, \frac{1}{5}, 1, 5, \ldots$

9. **PAY RATE** Your boss pays you $0.03 the first day you work, $0.06 the second day, $0.12 the third day, $0.24 the fourth day, and so on. How much do you earn on the seventh day? fourteenth day?

10. **BACTERIA** The table shows the number of bacteria in a sample for consecutive hours. Write the first eight terms of the sequence for the population. Interpret the eighth term.

Time	1 P.M.	2 P.M.	3 P.M.	4 P.M.
Bacteria	10	100	1000	10,000