Section 2 Practice & Application Exercises

In Exercises 1–4, look for a pattern and replace each ___?___ with the correct term. Describe the rule you used for each sequence.

1.

2. 7, 14, 21, 28, ___?___, ___?___, ___?___, ___?___, 63

3. 99, 90, 81, 72, ___?___, ___?___, ___?___, ___?___, 27

4. $\frac{1}{2}, \frac{1}{4}, \frac{1}{6}, \frac{1}{8}$, ___?___, ___?___, ___?___, ___?___, $\frac{1}{18}$

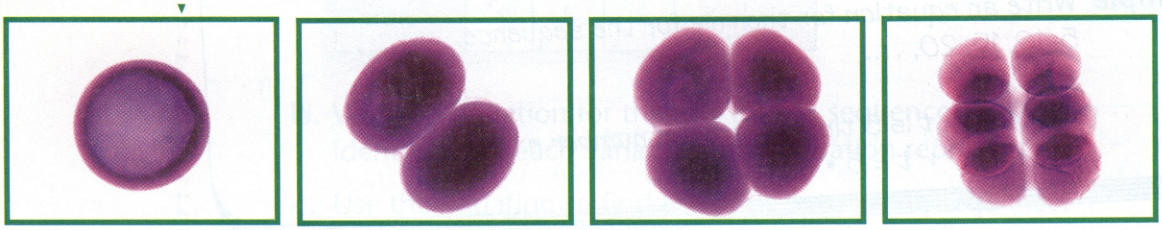
5. At the end of February, Ben began to save for a $240 mountain bike. At the time he had $113 in his savings account. His savings increased to $138 at the end of March and $163 at the end of April. If his savings pattern continues, when will he be able to buy the bike?

6. A middle school class schedule forms a sequence. Each period is the same length. The first three periods begin at 7:40 A.M., 8:30 A.M., and 9:20 A.M.

   a. What rule does the class schedule follow?

   b. Make a table showing the periods of the day and the times they begin. Using your rule from part (a), extend the table to find what time 7th period will begin.

7. **Science** Plants and animals are made up of tiny cells you can only see under a microscope. The pictures show a new starfish starting to grow from a single cell. The cell divides to form two cells. Then each of the new cells divides into two cells, and so on.



   a. The numbers of cells in the pictures form a sequence. Make a table and record the sequence.

   b. Describe the pattern that develops as the number of cells increases.

   c. How many cells would be in the 6th term of the sequence?