Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Applied Discrete - Sequences Quiz Review

***Determine if the following sequences are arithmetic, geometric, or neither. If the sequence is arithmetic or geometric, state the common difference or common ratio respectively.***

1) 2)

3) 4)

***For problems 5 through 8, find the formula for the nth term of each sequence (if applicable). Then, find the tenth term in each sequence.***

5) 6)

7) 8)

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Applied Discrete - Sequences Quiz Review

***Complete the table below.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Representation** | **Arithmetic or Geometric?** | **Common Difference or Ratio?** | **Formula for the nth term** | **Find the given term.** |
| 1. |  |  |  |  |
| 2. |  |  |  |  |
| 3. |  |  |  |  |
| 4. |  |  |  |  |
| 5. |  |  |  |  |
| 6. |  |  |  |  |
| 7. |  |  |  |  |
| 8. |  |  |  |  |
| 9. |  |  |  |  |
| 10. |  |  |  |  |

***For each of the situations below, determine if the sequence is arithmetic or geometric. Then, answer the question.***

11. A runner begins training by running 5 miles one week. The second week she runs a total of 6.5 miles and the third week she runs 8 miles. How much does she run on the tenth week?

12. Clara’s Clothing Shop opened eight years ago. The first year she made $3,000 profit. Each year thereafter, her profits averaged 50% greater than the previous year. How much did she make after eight years?