

Name: \_\_\_\_\_

Unit 6: Sequences

Date: \_\_\_\_\_ Period: \_\_\_\_\_

Notes: Arithmetic vs. Geometric Sequence Notes

**How can you tell if a sequence is Arithmetic or Geometric?** You must figure out if the group of terms has a common difference (arithmetic sequence) or a common ratio (geometric sequence). Circle your answers to each question.

1) **10, 20, 40, 80, ...**

A. Does it have a common difference or a common ratio?

B. Arithmetic or Geometric?

C. Find the next term: \_\_\_\_\_

D. Write the explicit rule: \_\_\_\_\_

E. Find the 8<sup>th</sup> term: \_\_\_\_\_

2) **40, 200, 1000, 5000, ...**

A. Does it have a common difference or a common ratio?

B. Arithmetic or Geometric?

C. Find the next term: \_\_\_\_\_

D. Write the explicit rule: \_\_\_\_\_

E. Find the 6<sup>th</sup> term: \_\_\_\_\_

3) **9, 10, 11, 12, ...**

A. Does it have a common difference or a common ratio?

B. Arithmetic or Geometric?

C. Find the next term: \_\_\_\_\_

D. Write the explicit rule: \_\_\_\_\_

E. Find the 20<sup>th</sup> term: \_\_\_\_\_

4) **16, 64, 256, 1024, ...**

A. Does it have a common difference or a common ratio?

B. Arithmetic or Geometric?

C. Find the next term: \_\_\_\_\_

D. Write the explicit rule: \_\_\_\_\_

E. Find the 10<sup>th</sup> term: \_\_\_\_\_

5) **-2, -5, -8, -11, ...**

A. Does it have a common difference or a common ratio?

B. Arithmetic or Geometric?

C. Find the next term: \_\_\_\_\_

D. Write the explicit rule: \_\_\_\_\_

E. Find the 13<sup>th</sup> term: \_\_\_\_\_

6) **6, 10, 14, 18, ...**

A. Does it have a common difference or a common ratio?

B. Arithmetic or Geometric?

C. Find the next term: \_\_\_\_\_

D. Write the explicit rule: \_\_\_\_\_

E. Find the 25<sup>th</sup> term: \_\_\_\_\_

7) **8, 3, -2, -7, ...**

A. Does it have a common difference or a common ratio?

B. Arithmetic or Geometric?

C. Find the next term: \_\_\_\_\_

D. Write the explicit rule: \_\_\_\_\_

E. Find the 50<sup>th</sup> term: \_\_\_\_\_