

Algebra III
Unit 1
Test Review

Name _____
Date _____
Period _____

Write the first 4 terms for each sequence:

1. $a_n = 4n - 3$

2. $a_n = \frac{2n+1}{2n}$

3. $a_n = \left(-\frac{1}{4}\right)^{n-1}$

4. Write the 15th term of the sequence in Problem 1.

5. Write the 200th term of the sequence in Problem 2.

Use sigma notation to express each of the following.

5. $3 + 10 + 17 + 24 + 31$

6. $1 + 3 + 5 + 7 + \dots + 25$

7. $8 + 4 + 2 + 1 + \frac{1}{2} + \frac{1}{4}$

Find the sum of each series.

8. $\sum_{n=1}^{30} 2n - 1$

9. $\sum_{k=1}^6 (-3)^k$

10. $\sum_{j=1}^5 2(-3)^j$