

Name _____

8.1 Practice WS

In Exercises 1–6, write the first six terms of the sequence.

1. $a_n = n - 3$

2. $a_n = 4 - n$

3. $a_n = n^3$

4. $a_n = n^2 - 5$

5. $a_n = 2^{2n}$

6. $a_n = -n^2 + 1$

In Exercises 7–19, describe the pattern, write the next term, and write a rule for the n th term of the sequence.

7. 1, 4, 7, 10, ...

8. 1, 3, 9, 27, ...

9. 1.5, 3, 4.5, 6, ...

In Exercises 10–15, write the series using summation.

10. $4 + 8 + 12 + 16 + 20$

11. $3 + 9 + 15 + 21 + 27$

12. $1 + 7 + 13 + 19 + \dots$

13. $-1 + 1 + 3 + 5 + \dots$

14. $\frac{1}{5} + \frac{1}{25} + \frac{1}{125} + \frac{1}{625} + \dots$

15. $\frac{1}{7} + \frac{2}{8} + \frac{3}{9} + \frac{4}{10} + \dots$

In Exercises 16–21, find the sum.

16. $\sum_{i=1}^4 3i$

17. $\sum_{i=1}^5 6i$

18. $\sum_{n=0}^5 n^2$

19. $\sum_{n=2}^7 (3n + 2)$

20. $\sum_{k=1}^6 (k^2 - 3)$

21. $\sum_{i=3}^7 \frac{5}{i}$