

LESSON **Practice B**
12-1 Introduction to Sequences

Find the first 5 terms of each sequence.

1. $a_1 = 1, a_n = 3(a_{n-1})$ 2. $a_1 = 2, a_n = 2(a_{n-1} + 1) - 5$ 3. $a_1 = -2, a_n = (a_{n-1})^2 - 1$

4. $a_1 = 1, a_n = 6 - 2(a_{n-1})$ 5. $a_1 = -1, a_n = (a_{n-1} - 1)^2 - 3$ 6. $a_1 = -2, a_n = \frac{2 - a_{n-1}}{2}$

7. $a_n = (n - 2)(n + 1)$ 8. $a_n = n(2n - 1)$ 9. $a_n = n^3 - n^2$

10. $a_n = \left(\frac{1}{2}\right)^{n-3}$ 11. $a_n = (-2)^{n-1}$ 12. $a_n = n^2 - 2n$

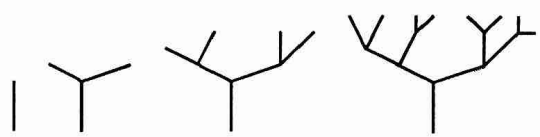
Write a possible explicit rule for the n th term of each sequence.

13. 8, 16, 24, 32, 40, ... 14. 0.1, 0.4, 0.9, 1.6, 2.5, ... 15. 3, 6, 11, 18, 27, ...

16. $\frac{3}{2}, \frac{3}{4}, \frac{3}{8}, \frac{3}{16}, \frac{3}{32}, \dots$ 17. -2, 1, 4, 7, 10, ... 18. 5, 1, 0.2, 0.04, 0.008, ...

Solve.

19. Find the number of line segments in the next two iterations. _____



20. Jim charges \$50 per week for lawn mowing and weeding services. He plans to increase his prices by 4% each year.

- a. Graph the sequence.
- b. Describe the pattern.

c. To the nearest dollar, how much will he charge per week in 5 years?

